

Chapter 6 – The gross domestic product for Norway 1830–2003

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1. Introduction

The official national accounts for Norway stretches back to 1865. On the basis of empirical observations it is, however, possible to draw these figures back to 1830. The main sources for this operation are records from contemporary scholars, Statistics Norway and Professor Ingvar Wedervang's Historical Archive on Wages and Prices, kept at the Norwegian School of Economics and Business Administration in Bergen. On the basis of estimates of national production made by Anton Martin Schweigaard and Martin Braun Tvethe in 1840 and 1848 respectively, we are able to construct reliable benchmark figures for 1835 and 1845.¹ By interpolating with annual indicators of output and value added in some of the most important sectors of the economy at the time, i.e. agriculture, fishery, forestry, maritime services, public services and other industries, we arrive at annual GDP figures for Norway 1830-1865. The series are presented both in current and fixed prices, both in total and per capita figures. The present work also presents calculations of GDP by expenditure from 1830 onwards.

The new figures for the period 1830-1865 are finally spliced with Statistics Norway's historical national accounts in 1865 and with revised national accounts from 1970 onwards.

2. What has been done so far?

In 1840 Anton Martin Schweigaard published his book on the Statistics of Norway (Norges Statistik). The book contains a set of gross production values for the main sectors of the Norwegian economy around 1835.² His estimates included agriculture, forestry, fisheries, mining,

1 Schweigaard 1840 and Tvethe 1848.

2 Schweigaard 1840.

manufacturing and transports. Schweigaard deliberately omitted trade, house construction, and most services. In line with the conventional wisdom, these were not considered value-creating activities.

In 1848 Martin Braun Tvethe refined Schweigaard's analysis, in his book under the same title. Tvethe, a statistician, who worked in the statistical office of the central government, summarised gross production for the main sectors of the Norwegian economy for a normal year around 1845.³ Both Schweigaard's and Tvethe's figures are well documented. However, their theoretical understanding of productive sectors, non-productive sectors and value added diverge significantly from the approach taken in modern national accounts.

Anders Kiær constructed the first estimates of Norwegian national income in 1887.⁴ Thereafter, scholars published various estimates for the years 1898, 1906 and 1913-1924.⁵ These were mainly built on income statistics collected for taxation purposes, and they cannot be considered as national accounts as we understand them today.

In the early 1930s plans for the construction of a complete set of national accounts were formulated at the Department of Economics at the University of Oslo. This work, under the supervision of Ragnar Frisch, did not result in actual estimates. Nevertheless, valuable insight was obtained into theoretical and practical problems concerning national accounting, and fairly good statistics were compiled.⁶

Under the German occupation, Statistics Norway made computations of national income for Norway 1935-1943. In line with similar series for other countries these numbers in principle constituted a system for national accounting. The figures, basically drawn from tax returns, income data, employment figures and industrial censuses, were published in 1946.⁷ In the same year the work on regular national accounts for Norway started. Documentation on the theoretical principles and general methods for national accounting in Norway has been given later.⁸ However, documentation of the sources has never been given.

The first volume of national accounts for Norway was published in 1952.⁹ These accounts covered the periods 1930-1939 and 1946-1951. In February 1952, Statistics Norway, at

3 Tvethe 1848.

4 Kiær 1887, 193-205.

5 OEEC 1953, 11.

6 Grytten & Hodne 1997, 11.

7 NOS 1946.

8 Aukrust 1955.

9 NOS 1952.

the request by the Department of Finance, started a study of the main features of economic and social development since 1900. In planning this study it became clear that it would be advantageous to draw information from national accounting figures. Thus, Statistics Norway went on to construct accounts for the period 1900-1929. The results were published in 1953.¹⁰ Revisions and extensions of the national account series were published in 1961 and 1964.¹¹ The last phase of the project was concluded in 1965 and 1968, when final versions of the historical national accounts for Norway spanning almost one hundred years, 1865-1960, was published.¹² The work was part of an international project on economic growth. Thus, the series were built on international standards for national accounting, outlined in the United Nation's System of National Accounts from 1953 (SNA 1953). The major achievement of this final publication was that annual aggregates of the economy had been calculated as far back as 1865. Basically, the 1965 publication summarises, revises and updates the earlier publications on historical national accounts. For its time the publication brought Norway to the top of international historical national accounting.

The publication is very well documented theoretically, but not empirically. The maximum margin of error is set to three percent for the period starting in 1930. Around the century it is set to 7-8 percent, and in 1865 about 20 percent.¹³

In 1994 a set of preliminary GDP figures for the period 1835-1865 was published independently of Statistics Norway.¹⁴ This series was revised and prolonged back to 1830 in 2000.¹⁵ The series were based on Schweigaard's and Tvethe's work from 1840 and 1848. Thus, 1835 and 1845 are used as benchmark years. On the basis of a set of macro economic indicators annual GDP figures were interpolated between 1835, 1845 and 1865. The estimates provide a relevant indicator for the rate of economic growth in the period. However, the annual fluctuations are not as well empirically based as the benchmark year calculations. Hence, these figures need to be revised to be able to establish valid and reliable annual series of GDP 1830-1865.

10 NOS 1953.

11 NOS 1961 and NOS 1964.

12 NOS 1965.

13 Bjerke 1966, 21-22.

14 Hodne & Grytten 1994, 93-113.

15 Hodne & Grytten 2000, 85-96.

3. The System of Historical National Accounts

National accounts represent a closed system of macroeconomic bookkeeping, which summarises economic activities by means of three complementary approaches. These are the production-, the income- and the expenditure approach. National income is by definition equal in each of the three different approaches. Due to lack of perfect information, the calculations, however, will give some discrepancies.

Table 1 illustrates the three different approaches as agreed on in an ongoing Nordic historical national account project.¹⁶ In the present work we use the production approach to establish GDP and thereafter the expenditure approach to establish key macro economic indicators. National product, income and expenditure can be expressed in gross or net, national or domestic, market prices or factor costs. In this manner the system of national accounts reports the cyclical functioning of an economy, i.e. from production to income, from income to expenditure, and the return from expenditure to production again.

Table 2 gives the terms of expression for national accounts from the product, the income and the expenditure side. National accounts have significant limitations. In particular one is central to the present work.¹⁷ In principle the national accounts only consider activities as part of national income when they are traded in a market. The system is, however, not entirely consistent. Several exceptions are made. An important change during the last centuries concerns the increasing role of the market and the diminishing role of non-market activities. If the calculations were strictly limited to the market sector, the growth in output and productivity would be overestimated. Production of agricultural products for own consumption is therefore included in the United Nation's System of National Accounts from 1993 (SNA 1993).

Despite its shortcomings the system of national accounts provides a more complete picture of the total economy than any other economic measure. It reflects the economic past in a consistent quantitative way.

¹⁶ Hjerpe 1996, 9.

¹⁷ Smits 2000, 4-11.

Table 1. Approaches in national accounting.

Production account	Incomes account	Expenditure account
Value added a) in primary production b) in refined goods c) in services	Compensation to employees + Operating surplus + Consumption of fixed capital	Consumption a) Private consumption * in households * in organisations b) Public consumption + Gross fixed capital formation (Investments) a) in private sector b) in public sector + Change in stocks + Net exports
= Gross Domestic Product at factor costs + Indirect taxes - Subsidies	= National Income - Net incomes from abroad	
= Gross Domestic Product at market prices	= Gross Domestic Income	= Gross Domestic Expenditure

Table 2. Terms of expression in national accounting.

Gross	National	Market prices
- Depreciation	- Net primary income from abroad	- Indirect taxes + Subsidies
= Net	= Domestic	= Factor Costs

4. Approach

In the present work new estimates of the Norwegian GDP for the period 1830-1865 are calculated. These are spliced with Statistics Norway's GDP figures from 1865 onwards. Thus, annual GDP figures 1830-2003 are offered. These enable us to map economic growth and business cycles for a period covering more than 170 years. The figures are calculated from the production side. For the period 1830-1865 value added figures are calculated for the benchmark years 1835 and 1845. These are revisions of previous benchmark year calculations. Using these benchmark years, value added series for agriculture, and relevant indicators for fisheries, forestry, maritime services, public services and other industries, annual GDP figures are interpolated between the benchmark years and 1865.

5. Benchmark year calculations

Schweigaard and Tvethe have estimated the value of gross production by industry around 1835 and 1845 respectively. Using their figures we are able to establish valid and reliable estimates of gross national product for these years. Their estimates are minimum figures, in as much as they almost consistently use the most conservative estimates of volumes and prices. Additionally, in principle they did not consider services as production. Their method is an output rather than a value-added approach. Hence, their figures cannot be used in national accounts, as we understand them today.

Another important difference between our and Schweigaard's and Tvethe's work is their sectorial approach, while we, according to the present standards for national accounting, basically adopt a product approach. This means that a significant numbers of products produced on farms, e.g. cheese, butter, clothing, handicrafts etc. are not considered as part of agricultural production, but manufacturing industry. This also constitute an important difference between the approach taken here, and previous articles on historical national accounts 1830-1865.

On the basis of Schweigaard's and Tvethe's computations, along with other empirical sources and historical research, we are able to construct GDP for Norway 1835 and 1845 from the production side, and with a value added approach. Benchmark year figures for 1835 and 1845 provide bases for interpolations 1835-1845 and 1845-1865 and extrapolations backwards

from 1835 to 1830.

5.1 Agriculture

Schweigaard calculated the gross value of agricultural production in 1835 at 14.3 million speciedaler, while Tvethe offered a figure of 19.5 speciedaler for 1845.¹⁸ In Norwegian kroner these figures amounted to 57.2 and 78 million respectively. These were later revised to 23.2 and 27.4 million speciedaler, i.e. 92.8 and 109.6 million kroner in research carried out by Hodne and Grytten.¹⁹

These calculations represent gross figures for agriculture and satellite industries. In 2004 annual series of agriculture's contribution of Norwegian GDP 1830-1865 was published for the first time.²⁰ In this work contemporary sources were carefully evaluated, output, input and value added were calculated on the basis of the most valid and reliable sources of the time.

Arable output is calculated to 38.2, and livestock output to 35.5 million kroner in 1835. As for 1845 the figures are 44.5 and 41.2 million respectively. In sum we arrive at 73.7 and 85.8 million kroner. This is significantly lower than the previous estimates by Hodne and Grytten. A major reason is that the present figures do not include the production of hay. Another reason is that contrary to previous work we apply a product rather than a sectorial approach. According to the new calculations value added in Norwegian agriculture reached a total of 51.6 million in 1835 and 61.1 million in 1845. Arable production was higher than livestock production.²¹

5.2 Forestry

According to Schweigaard the value of forest production was three million speciedaler in 1835, while Tvethe has estimated the gross output value for 1845 to 3.75 speciedaler.²² The total included the value of timber exports, wood deliveries to the mines, and estimated value

18 Schweigaard 1840, 76-80 and Tvethe 1848, 50-55.

19 Hodne & Grytten 2000, 90.

20 Grytten 2004A, 47-76.

21 Grytten 2004A, 58.

22 Schweigaard 1840, 78-93 and Tvethe 1848, 74.

of firewood. Both Schweigaard and Tvethe are uncertain about prices and the value of both exports and domestic use. Camilla Brautaset, using British sources on imports from Norway, has calculated the value of the Norwegian exports of timber. She concludes that the export value was 10.9 million kroner in 1835 and 26.7 million kroner in 1845.²³ Production for domestic use must be added and inputs subtracted. According to Schweigaard the value of output of domestically used wood amounted to 1.112 million speciedaler. However, these figures are calculated on the basis of non-reliable prices. Excerpting prices taken from the Wedervang Archive at the Norwegian School of Economics and Business Administration in Bergen, we conclude that the total gross value of output of wood for domestic use should be set to two million speciedaler or eight million kroner.²⁴

To sum up, the total gross output value of forestry reach 18.9 million kroner in 1835. For 1845 the total amount would sum up to 34.7 million. Input is estimated to have been 25 percent of output in 1835 and 32 percent in 1845. Thus, we reach at value added figures of 14.2 and 23.1 million kroner respectively.

5.3 Fisheries

Camilla Brutaset has calculated that exports of fish amounted to 12.6 and 15.8 million kroner in 1835 and 1845.²⁵ Experts on the fisheries sector have concluded that about 20 percent of the catches were consumed domestically.²⁶ Since the exports of fish were somewhat lower in 1835 and 1845 than in the years around, this share in reality probably was a bit higher. This means that the gross value of the fisheries amounted to around 16 and 20 million kroner. This implies a slightly upward revision compared to Schweigaard's and Tvethe's figures, and a moderate downward revision compared to similar calculations carried out in 2000.²⁷ With an input share of 25 percent, we find that value added in Norwegian fisheries amounted to 12 and 15 million kroner in 1835 and 1845 respectively.

23 Brautaset 2003, 263.

24 W 137, W 139, W271, W 272 and W 273.

25 Brautaset 2003, 254.

26 Solhaug 1976, 697, 716 and 743-744.

27 Hodne & Grytten 2000, 87.

5.4 Mining

Schweigaard estimated the total gross output value of mining to have been 0.7 million speciedaler in 1835, while Tvethe a decade later concludes with about one million around 1845.²⁸ Compared to other sources there must have been some minor under reporting. Thus, we adjust the figures to 0.8 and 1.1 million speciedaler. We have to subtract inputs, which basically would be coal and equipment.

We also have to bear in mind that mining in that time was a very labour intensive industry. Thus, input to be deducted should be limited. We find input to have been around 12-18 percent.²⁹ We then arrive at value added figures of 0.7 speciedaler in 1835 and 0.9 speciedaler in 1845. Measured in kroner this amounts to 2.8 million and 3.6 million. Mining was still an important part of the Norwegian economy at that time.

5.5 Manufacturing and crafts

In 1887 Anders N. Kiær made estimates of the value of production in manufacturing, crafts and public construction around 1850. His estimates were more like value added than gross output figures. According to Kiær value added of this sector was 5.5 speciedaler or 22 million kroner in 1850.³⁰ Out of this a good four million speciedaler or 16 million kroner, were manufacturing and crafts, where crafts were the most important contributor. Assuming the same development between 1835 and 1850 as 1850 and 1865 we reach at value added figures for manufacturing and crafts in 1835 and 1845. These are set to three and 3.7 million speciedaler, which are the equivalents to 12 and 14.8 million kroner.

However, Kiær did not include manufacturing production on farms and within the fisheries in a satisfactory manner. Thus, one of the major manufacturing sectors at the time, food processing, is far from fully included. On the basis of the literature on fishing and agriculture, we submit an addition of seven million kroner in 1835 and nine million in 1845. Hence, we arrive at value added figures of 19 and 23.8 million kroner.

²⁸ Schweigaard 1840, 118, Tvethe 1848, 91.

²⁹ Hodne 1981, 44.

³⁰ Kiær 1887, 193-205.

5.6 Building and construction

According to Kiær, public construction accounted for almost 1.5 million speciedaler in 1850.³¹ His very wide definition of public construction implies that these numbers are somewhat high. However, Kiær did not give any precise numbers for private construction. Private roads for public use are to a large extent taken into account, while private building activity is not. Private road construction for private use is also omitted in Kiær's work. In line with the Swedish historical national accounts it should be reasonable to assume that private construction was of the same magnitude as public.³²

In consequence, building and construction must have summed up to around 3.0 million speciedaler in 1850. Public accounts leave us with a hint of the growth in building and construction between 1835 and 1850. This leaves us with a value added of 2.0 million speciedaler in 1835 and 2.5 million in 1845. Thus, we end up with eight and ten million kroner respectively.

5.7 Housing

Housing definitely was one of the largest sectors of the economy. Unfortunately, we do not have many sources of the size of this sector for early nineteenth century Norway. However, the Swedish historical national accounts again come to our help. According to these housing accounted for 14 percent of the total GDP in both 1835 and 1845.³³

Compared to the Norwegian historical national accounts stretching back to 1865, this seems somewhat high.³⁴ By setting a ten percent lower estimate of housing's contribution to Norwegian GDP per capita, we arrive at 19.0 million kroner in 1835 and 21.8 million in 1845.

31 Kiær 1887, 201-204.

32 Krantz 2001, 12-13.

33 Krantz 2001, 12-13.

34 Bjerke 1966, 53-55.

5.8 Maritime transport

Camilla Brautaset calculated gross production values for the Norwegian merchant fleet of 14.4 million kroner in 1835 and 15.1 million in 1845.³⁵ These figures are significantly higher than those given by Schweigaard and Tvethe, which obviously are far too low.

Maritime transport, despite high density of crew during the age of sail, was relatively capital intensive. Inputs were high, and to a large extent foreign. We do not precisely know the ratio of inputs to output. However, Anders Kiær examined the cost structure in the Norwegian maritime sector in the period. According to his work 50-60 percent of the gross output was produced in the sector itself.³⁶ This means that input accounted for slightly less than 50 percent. This share was probably increasing during the nineteenth century, as the ships became less labour intensive. Thus, we arrive at inputs of 40 percent of gross output in 1835 and 1845, implying value added figures for maritime transport of 8.6 and 9.1 million kroner.

5.9 Domestic transport and communication

It is difficult to find a sound empirical base on which to estimate domestic transport and communication. Coastal transport definitely had a lower value than ocean transport. On the other hand it must have been significant. The same applies to horse transport.

According to Schweigaard and Tvethe the gross output from a horse equalled the gross output from a cow.³⁷ Total gross output from cows have been estimated to 23 million kroner in 1835 and 29.3 million in 1845. The number of cows was six times higher than the number of horses in 1835 and 6.4 times higher in 1845.³⁸ This means gross output from horses of around 3.8 million in 1835 and 4.6 million in 1845. Inputs to horsepower transport are estimated to 20 percent of output. This leaves us with a value added of 3.1 million speciedaler in 1835 and 3.7 million in 1845.

The size of domestic water transport is more difficult to find. However, along the coast and by the rivers waterborne traffic was of great importance. Timber was transported down the rivers; along the coast people and goods were carried by a flotilla of locally built vessels. The

35 Brautaset 2003, 259.

36 Kiær 1871 and Hodne 1981, 139.

37 Schweigaard 1840, 72-78.

38 Grytten 2004A, 56-57.

waterway was the most important means of transport along the coastline. Thus, it seems reasonable to set the domestic water transport equal to that of horse transport. This is also in line with expert views.³⁹ Thus, we end up with value added figures for domestic transport of 6.2 and 7.4 million kroner.

5.10 Domestic trade

Schweigaard and Tvethe did not consider domestic trade as real production, but distribution. Neither distribution nor trade was reckoned as production. However, on the basis of Kiær, the value added of domestic trade is calculated to 12 million kroner in 1850.⁴⁰ This is probably a minimum estimate. Thus, we set the same figure for 1845 and assume the same volume of domestic trade per capita in 1835. Thus, we conclude with ten million kroner in 1835.

5.11 Private services

Census data of the labour force in private services has been given as 57.000 in 1835 and 63.000 in 1845. This tallies with the figures given in the population census from 1875.⁴¹ In addition, private services were often carried out on a part time basis. In accordance with the Swedish historical national accounts a number of 100.000 in the Norwegian private service labour force in 1835 and 110.000 in 1845 would be more correct.⁴²

Using Torill Lønningdal's research in the Wedervang Archive and public records by Statistics Norway, we find information on wages for domestic servants and other kinds of private services. Average wages hovered around 196 kroner in 1835 and 225 kroner in 1845, board and lodging included.⁴³ The numbers applies for both full and part timers in private services. Given that value added in private services equals wages, we then reach at total value added for private services of 19.6 and 24.8 million kroner in 1835 and 1845 respectively.

These numbers are well in line with calculations of the private sector's contribution to

39 Bjørnland 1981, 20.

40 Kiær 1887, 198.

41 NOS 1978, 36.

42 Krantz 2001, 12-18.

43 Lønningdal 1984, Hodne et al 1995, 61-75 and 238-248.

GDP made for Sweden, whose per capita figures tallies well with the Norwegian ones.⁴⁴

5.12 Public services

Public services were put on a new footing from 1837. In that year the king and the parliament introduced local self-government in the rural districts. Both county and municipal councils were set on foot. Therefore, to appraise the magnitude of public administration requires information on three levels: central, county and local.

Due to changes in accounting and statistics it is not easy to establish consistent figures for the time before 1880. However, relying on previous work by writers on Norwegian nineteenth century economic history, we are able to arrive at figures for 1835 and 1845. The estimates are built on work by Fritz Hodne, Helge Seip and Edgar Hovland.⁴⁵ Summing up we arrive at gross output of 3.3 million speciedaler in 1835 and 4.0 speciedaler in 1845. Value added is expressed as wages. Thus, we arrive at 1.7 and 2.0 million speciedaler, inclusive board and lodging. These amounts to 6.8 and 8.0 million kroner respectively.

5.13 Military services

Military services' contribution to GDP is also set equal to wages. On the basis of Hodne's work on the Norwegian public sector in the nineteenth century, we conclude that military services amounted to one third of other public services.⁴⁶ This is also in line with the calculations given by Juul Bjerke in connection with his work on historical national accounts for Norway.⁴⁷ We then reach almost 0.6 million speciedaler for 1835 and close to 0.7 million for 1845, i.e. 2.3 and 2.8 million kroner.

44 Krantz 2001, 12-14.

45 Hodne 1984, 306-307, Hovland 1987, 77 and Seip 1949, 33-34.

46 Hodne 1984, 306-309.

47 Bjerke 1966, 96-97.

6. GDP for Norway 1835 and 1845

Summing up our calculations of value added in 13 sectors, covering all industries in Norway in 1835 and 1845, we are now in a position to establish aggregated GDP figures for these two benchmark years. These are reported in table 3. All figures are in current prices. The speciedaler is converted to kroner at a ratio of 1:4, i.e., one speciedaler equals four kroner. This is the equivalent of the par gold values set by the Parliament in 1873 and confirmed in 1875.

Table 3. GDP for Norway in 1835 and 1845, in million kroner, current prices.

	1835		1845	
	Kroner	Percent	Kroner	Percent
Agriculture	51.6	28.7	61.1	27.5
Forestry	14.2	7.9	23.1	10.4
Fishing	12.0	6.7	15.0	6.7
Mining	2.8	1.6	3.6	1.6
Manufacturing and Crafts	19.0	10.6	23.8	10.7
Building and Construction	8.0	4.4	10.0	4.5
Housing	19.0	10.6	21.8	9.8
Maritime Transport	8.6	4.8	9.1	4.1
Domestic Transport	6.2	3.4	7.4	3.3
Domestic Trade	10.0	5.5	12.0	5.4
Private Services	19.6	10.9	24.8	11.1
Public Services	6.6	3.7	7.9	3.6
Military Services	2.2	1.2	2.8	1.3
Sum	179.8	100.0	222.4	100.0

7. Comparison of benchmark year figures

According to table 3 the primary sector, including agriculture, forestry, fisheries and mining, accounted for 45-46 percent in both 1835 and 1845. In the historical national accounts by Statistics Norway, the share was about 40 percent in 1865.⁴⁸ In the Swedish historical national accounts the primary sector accounted for around 40 percent in 1835 and 1845.⁴⁹ The difference between Norway and Sweden can be explained by the significant size of the Norwegian fisheries. In fact, it may come as a surprise that this industry did not make up more than close to seven percent of total value added. However, this is due to the fact that fish to a large extent was processed from an early stage, and thus, is accounted for in manufacturing industry.⁵⁰ Hence, the significance of this sector was higher than reflected in its direct share of GDP.

In the historical national accounts for Norway published by Statistics Norway, the secondary sector accounted for less than 20 percent of GDP in 1865, against 15-16 percent in 1835 and 1845.⁵¹ This seems reasonable, since the first wave of industrialisation swept over Norway from the middle of the 1840s to the middle of the 1860s.⁵² In the Swedish figures the primary sector represented 19 percent in 1835 and 1845.⁵³ However, mining is included in these numbers. By subtracting that industry, Sweden is left with a primary sector of about 16 percent in 1835 and 1845 – equal to the figures for Norway.

Transport and communication made up around eight percent of total GDP in 1835 and 1845, compared to five percent for Sweden, which had a significantly smaller merchant fleet.⁵⁴ Norwegian transport reached ten percent in 1865.⁵⁵ In view of the rapid growth of the Norwegian merchant fleet from 1850 onwards, this figure also seems reasonable.

Finally, the rest of the service sector, including housing, accounted for 31-32 percent in 1835 and 1845, close to both the Swedish figures and the 1865 figures from Statistics Norway.

48 Bjerke 1966, 53-55.

49 Krantz 2001, 12-13.

50 Solhaug 1994, 3.

51 Bjerke 1966, 55.

52 Bergh et al 1991, 142-146.

53 Krantz 2001, 12-13.

54 Krantz 2001, 12-13.

55 Bjerke 1966, 54-55.

8. Inter- and extrapolations

After having established benchmark year calculations for 1835 and 1845, we are now able to interpolate annual GDP figures 1835-1845 and 1845-1865. In addition we extrapolate annual GDP back to 1830.

We use six different indicators to interpolate 1835-1865 and extrapolate 1830-1835. The first series is value added for agriculture 1830-1865. Annual figures are calculated for output, input and value added of arable and livestock production.⁵⁶ These are drawn from valid and reliable sources from the nineteenth century. They are derived from both consumption and production figures. The main sources of volumes are the nation wide agricultural censuses, import data, consumption data and farm accounts.⁵⁷ The bulk of the price data is taken from the Wedervang Archive and public records kept by Statistics Norway.⁵⁸ The Wedervang Archive reports product prices regularly collected by public servants in all the counties of the country.

The second indicator used by us, is estimates of fish production 1830-1865. These are derived from Camilla Brautaset's work on Norwegian exports in the period.⁵⁹ On the basis of expert opinions, we conclude that about 20 percent of the value of fish exports went into domestic consumption.⁶⁰ In other words, using the annual export figures for fish, we obtain a measure for total production and interpolate between the benchmark years.

The third indicator is maritime services provided by the merchant fleet. In her work on Norwegian exports 1830-1865, Camilla Brautaset calculated the value of maritime services provided by foreign-going vessels. She calculated freight rates, distances and gross freight earnings. These serve as an indicator of the development in maritime services 1830-1865.⁶¹

The fourth indicator for inter- and extrapolations is export of wood and timber. The most common use of forestry products was exports. In her series of Norwegian exports 1830-1865, Camilla Brautaset also included wood and timber. Thus, we use her aggregated series as

56 Grytten 2004A, 73-76.

57 Department of Finance 1839, 4, Department of Finance 1843, Central Statistical Office 1867, NOS 1886, 56-57, NOS 1893, 54-55, NOS 1949, 72, NOS 1969, 138.

Hasund 1914, Hasund, 1932, 184 and Hovland, 1978, 331-346.

58 W 14, W 16, W 17, W 18, W 20, W 269, W 271, W 272, W 273, W 383, W 396 and NOS 1915, 3-5.

59 Brautaset 2003, 49-96.

60 Solhaug 1976, 692.

61 Brautaset 2003, 129-167.

an indication of the annual development in this sector.⁶²

The fifth indicator is state accounts. Fritz Hodne has assembled figures for administration, defence, national debt payments and investments from 1825 onwards. Here we use administration and defence expenditures as indicators of annual development in public services and military services.⁶³

Our sixth and last indicator is the stock of money, or more precisely in this context; notes and coin in circulation.⁶⁴ The stock of money usually reflects the development of GDP. This was particularly so in the period previous to World War II. The correlation between money stock and GDP in nominal terms was very high 1865-1913. The same is the case for the sum of the above indicators and the money stock 1839-1865.

However, due to changing velocity of money the development of the money stock has to be adjusted in order to fit into the overall trend of economic growth per capita. Thus, we first find the annual growth rates of GDP between the benchmark years, and trend adjusts the stock of notes and coins in circulation to a scale that gives the same rate of annual growth. By doing this, we obtain a representative indicator of annual fluctuations in GDP for the monetary sector not yet accounted for.

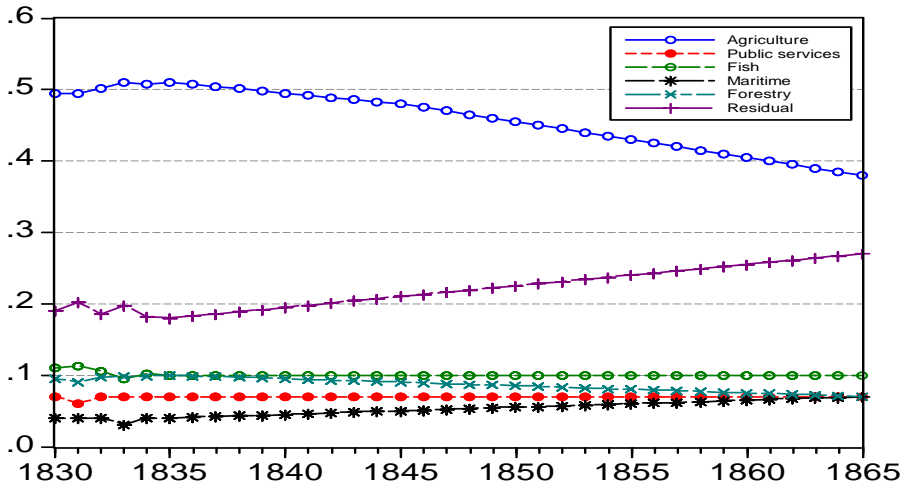
To be able to construct annual GDP figures we need to have reliable weights for each of our indicators. Of course it would have been ideal to use directly the weights reported in table 3. However, we do not have indicators for all the thirteen industries. Thus, our annual series will serve rather as indicators for larger sectors of the total economy. In view of their importance in the economy in the benchmark years, we have concluded with the weights reported in figure 1.

62 Brautaset 2003, 168-189.

63 Hodne 1984, 306-309.

64 Chapter 5 in this book.

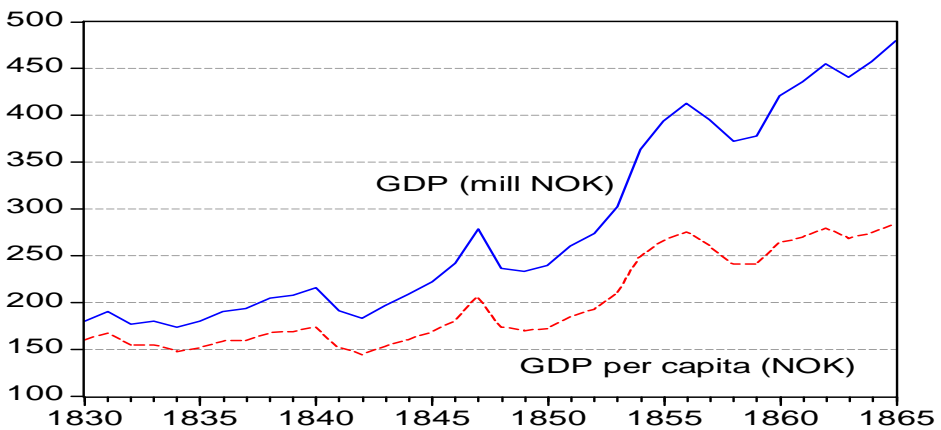
Figure 1. GDP inter- and extrapolation weights 1830-1865.



9. Annual GDP 1830-1865

By splicing the inter- and extrapolation series with the benchmark year calculations we finally reach annual GDP figures for Norway 1830-1865. These are reported in figure 2, both as total GDP and GDP per capita.

Figure 2. GDP for Norway 1830-1865 in mill NOK.



10. Fixed price calculations

To establish volume figures the series given in current prices have to be deflated. According to SNA 1993 we use Paasche price indices P_p to go from nominal to fixed price series.⁶⁵ Thus, we apply the equation below:

$$(1) \quad P_p = \frac{\sum p^t q^t}{\sum p^0 q^t}$$

Here p denotes prices, q volumes, 0 first year or base year and t the actual year under observation. We then obtain Laspeyres (L) volumes (Q_L), according to the international standards:

$$(2) \quad Q_L = \frac{\sum p^0 q^t}{\sum p^0 q^0}$$

According to SNA 1993 one should also use a double deflation technique, which implies that both output and input are deflated. In principle this system is adopted here, where e denotes value added in fixed prices, x output and h input.

$$(3) \quad e = \frac{\sum p^t x^t}{p^0 x^t} - \frac{\sum p^t h^t}{p^0 h^t}$$

Following the guidelines worked out in a project on common methodology in establishing Nordic historical national accounts, we use 1830 as the base year for the period 1818-1850 and 1861 for the period 1850-1874. These are representative base years towards the middle of the period they cover.⁶⁶

The price data in the deflator are taken from different sources. We use the input and output deflator from a recent publication on agriculture's contribution to GDP.⁶⁷ For fish, forestry and maritime services we use the deflators constructed by Camilla Brautaset.⁶⁸ For public services we use a deflator constructed for private consumption.⁶⁹ As for the residual, we use a weighted average of the other deflators.

65 NOS 1997, 15.

66 Grytten 2001, 42.

67 Grytten 2004A, 74.

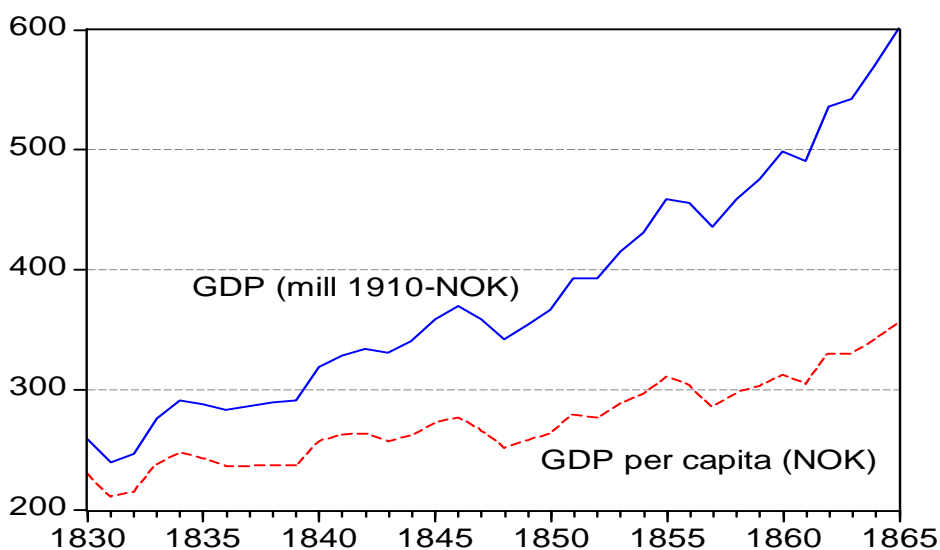
68 Brautaset 2003, 256, 261 and 264.

69 Grytten 2004B, 187-196.

On the basis of these deflators, fixed price series are constructed for each indicator. These are weighted according to a Paasche approach, with the same weights as in figure 1. The figures are summed to aggregated fixed price series. Finally, on the basis of the fixed and current price series an implicit deflator for GDP is constructed.

GDP 1830-1865 in fixed prices, with 1910 as reference year, is reported in figure 3. The graph reveals significant business cycles. However, there is a steady over-all trend of growth, in particular after 1848.

Figure 3 GDP for Norway 1830-1865 in mill 1910-NOK.



11. GDP by expenditures 1830-1865

On the basis of research by other scholars and sources not used for national accounting previously it is possible to establish GDP figures from the expenditure side. Except for the series of total exports these series are more preliminary than the aggregated GDP figures, but still serve as reliable indicators for the macro economic development in the period. On the other side, they are probably as reliable as their corresponding series 1865-1899.

11.1 Final consumption expenditures of households and NPISHs

Consumption expenditures of households and non-profit institutions serving households (NPISHs) are estimated here on the basis of new and detailed calculations of private consumption of agricultural products together with previous estimates of private consumption. Annual output of agricultural products 1830-1865 has newly been calculated. The consumption of agricultural products is in principle found by domestic output less exports plus imports in some benchmark years: 1835, 1840, 1845, 1850, 1855 and 1865. The data are taken from agricultural censuses and the foreign trade statistics.⁷⁰ The domestic output data for 1835 and 1845 are revised upwards in order to eliminate under reporting. Annual estimates of agricultural consumption are interpolated between the benchmark years on the basis of output and import figures.

According to consumption surveys agricultural products accounted for about 50 percent of total consumption 1830-1865.⁷¹ In addition we use previous series of private consumption estimated on the basis of the elasticity of private consumption to GDP 1865-1910.⁷² The elasticity is estimated by using the historical national account series by Statistics Norway for the period. This series of private consumption is given the remaining 50 percent as weight. The weighted sum of these two private consumption series gives an annual series of final consumption expenditures of households and NPISHs. The figures are given in volumes, and we present them as fixed price series here.

11.2 Final consumption expenditures of general government

The series containing consumption expenditures of general government is extrapolated backwards from 1865 by using Fritz Hodne's figures on public expenditures.⁷³ The data by Hodne was compiled in connection with his doctoral dissertation. His series are based on data from

70 Department of Finance 1839, 4, Department of Finance 1843, Central Statistical Office 1867, NOS 1886, 56-57, NOS 1893, 54-55, NOS 1949, 72, 190-192, NOS 1969, 138, Hasund 1914, Hasund 1932, 184 and Hovland, 1978, 331-346.

71 Grytten & Minde 1998, 42-58.

72 Hodne & Grytten 2000, 91-92.

73 Hodne 1984, 306-309. Annual series of public sectors contribution to GDP is under construction: Bjørsvik (2003), 125-136

departmental sources. Most of the sources are expenditure accounts made by the administration of the central government.

11.3 Total exports

Exports are taken from Camilla Brautaset's doctoral dissertation on the size of the Norwegian export sector 1830-1865. Her figures will serve as part of a "final" set of historical national accounts for Norway 1830-1865. Her data on volumes are taken from the official foreign trade statistics, which in some cases have been corrected by her.⁷⁴ Her price data were basically culled from the very rich export price data archives in Bergen and partly calculated on the basis of import price data from importing countries of Norwegian commodities.⁷⁵ She has also been able to establish reliable freight rates for the period. All in all, the work by Brautaset seems to include some of the most reliable historical national account series in the Nordic countries for the nineteenth century.

11.4 Total imports

Imports are extrapolated on the basis of public sources from Statistics Norway. The bureau has published fixed price calculations of exports with traditional goods back to 1851.⁷⁶ We have spliced these with the export series from 1865 onwards. For the period before 1851 we also use the foreign trade statistics. Statistics Norway has annual, though incomplete series of the most important exports and imports products back to 1828.⁷⁷ The figures are in volumes. We have taken 30 of the most common products and weighted them by their share of total imports in 1851. The weighted average then serves as an indicator of the development of imports 1830-1850. This series is spliced with the other series in 1851.

11.5 Gross fixed capital formation

Finally, an indicator for gross fixed capital formation has been found by a residual. In princi-

74 Brautaset 2003, 251-268.

75 W 397, W 370 and Wallem 1893, 202-203.

76 NOS 1969, 261 and NOS 1949, 162.

77 NOS 1949, 190-192.

ple GDP plus total imports less consumption expenditures of households and NPISHs less consumption expenditures of general government less total exports give gross fixed capital formation. We do not know the changes in stocks during the period. Thus, our numbers are more likely to reflect gross capital formation. The volume indicator for 1830-1865 is thereafter spliced with the figures from 1865 onwards. We then obtain a continuous volume series for gross (fixed) capital formation 1830-2003.

12. GDP 1865-1961

The existing GDP figures for Norway from 1865 onwards are calculated by Statistics Norway. For the period 1865-1961 they are taken from the historical national accounts published in 1965. These are constructed on the basis of the United Nation's System of National Accounts from 1953 (SNA 1953), with some modifications, however. One important modification is connected to the definition of gross capital formation. In the Norwegian System of National Accounts (NNA), repairs and maintenance are included, so is natural increase in standing forests. In the period in question, this implies that the inclusion of repairs and maintenance makes the Norwegian GDP artificially high compared to other countries. As for the inclusion of increase in standing forest, the effect was almost neutral, since the stock of standing forest was fairly constant in the period.

Adjusting for the differences between the SNA and NNA implies a downward adjustment of the Norwegian GDP of eight to nine percent 1930-1960.⁷⁸ We do not know the adjustment rates for the years prior to 1930. However, it must have been significantly lower for the period 1900-1930, and prior to 1900 probably non-existent. The level of repairs and maintenance has not been estimated for the years before 1930. When we splice the GDP-figures before 1970 with modern figures thereafter, they automatically become closer to SNA 1993. After this correction the Norwegian GDP figures for 1865-1970 become closer to international figures.⁷⁹ They also become more comparable over time. The methodological approach to these accounts are well documented, whereas there is a significant lack of references to sources. For the nineteenth century there is hardly any source references at all. However, another publication, *Trends in Norwegian Economy 1865-1960*, provide some information on

78 NOS 1965, 364-365.

79 Maddison 1995, 172-196.

sources and principles behind the nineteenth century historical national accounts, mainly on the basis of foreign trade data, which played a major role in the establishment of the accounts 1865-1899.⁸⁰

The historical national accounts are impressively detailed from 1930 onwards. They give definitions of the 19 main flows and 22 main sectors with principles of estimation. The number of production accounts, sub-accounts included, is 67 for 1930-1949. Thereafter, there are 88 accounts up to 1959, and then 129 for the last years.

Fixed price calculations were carried out with 1910 as base year for the period 1865-1929, 1938 for 1930-1939 and 1955 for 1946-1961. For the war years 1940-1945, we only have imprecise estimates of GDP for Norway.⁸¹

As already mentioned Juul Bjerke suggested that within the framework of the applied principles, standards, sources and definitions the maximum margins of error vary between plus minus three percent from 1930 onwards, 7-8 percent for 1900-1930 and 20 percent 1865-1899.⁸² This means that the accounts for 1930-1961 are astonishingly precise. Compared to most countries they are fairly precise for the period 1900-1930. Finally, for the period previous to 1900 they are not convincingly reliable when it comes to levels. However, they serve as a trustworthy indicator of economic development in the period, in as much as they truly mirror the short and long term fluctuations in GDP.

13. GDP 1962-1978

In 1968 the United Nation issued new guidelines for national accounting (SNA 1968). The first Norwegian national accounts constrained within this framework were published in 1973. In addition to changes in definitions and standards, improved computation methods were introduced. The revised series covered every year back to 1962 in detail, and back to 1949 with the main aggregated series.⁸³ In consequence, the figures from 1949 onwards were revised, and more in line with the international standards. Fixed price calculations were made with different base years, shifting about every tenth or fifth year.

80 Bjerke 1966.

81 NOS 1965, 52-55 and NOS 1953, 74-75.

82 Bjerke 1966, 21-22.

83 NOS 1994, 527-532.

The sources for these accounts are well documented, as we find them in the public statistics published by Statistics Norway. The data were collected from firms with the aim of constructing national accounts. Thus, the accounts for this period seem very reliable.

In the 1980s the national accounts system was further expanded with integrated quarterly accounts stretching back to 1978 and income accounts for institutional sectors stretching back to 1975. A labour accounting system was also developed with employment figures specified by industry, gender and job status going back to 1962.

14. GDP 1970-2003

Finally, Statistics Norway adopted the System of National Accounts from 1993 (SNA 1993), published by the United Nations, OECD, the EU-Commission, IMF and IBRD; and the European System of Accounts from 1995 (ESA 1995), published by Eurostat and the EU-Commission. As part of the European Economic Area (EEA) Norway is to follow ESA 1995 from 1999. The Norwegian version of this system is called ENS, which reflects SNA 1993 and ESA 1995 in detail. The coverage of the national accounts was extended to include more of domestic production. In other words, the emphasis was placed more on product, less on sector, and new definitions were adopted.

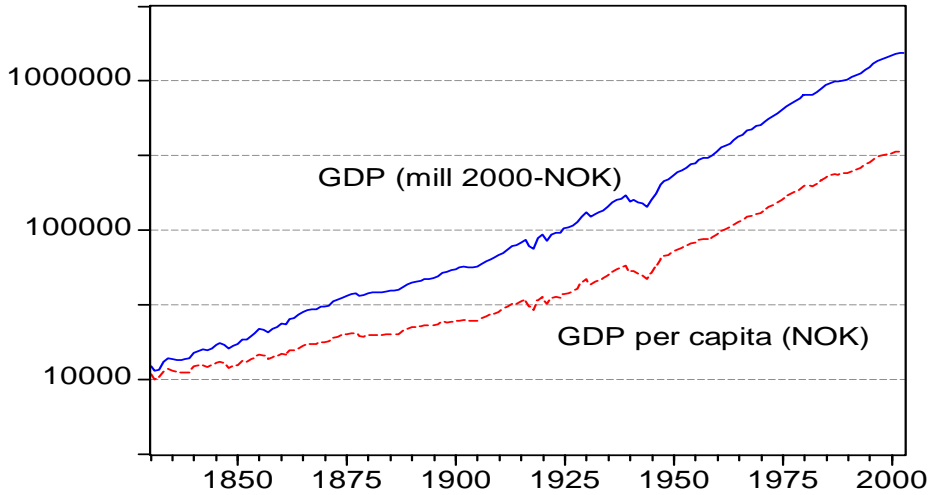
Instead of using fixed price calculations with base years every fifth year, t-1 calculations were adopted. In this respect Norway was a pioneer country. The t-1 revision implies that the base year is changed for every year, so that the previous year serves as base year for the current year. Thereafter, the annual figures are spliced together with one year chosen as a reference year. The first revised figures were published in 1995, and a main revision back to 1978 was published in 1997.⁸⁴ Main revisions have later been made back to 1970.⁸⁵ As result of the new standards, the Norwegian GDP was adjusted upwards significantly, with about ten percent at the most.

We finally establish a continuous set of GDP-figures for Norway for the entire period 1830-2003 by splicing the historical national accounts with the present national accounts. These are presented in fixed prices, with 1990 as reference year in figure 4.

84 NOS 1997.

85 www.ssb.no/emner/09/01/nr/

Figure 4. GDP for Norway in mill 2000-NOK.



15. Summary

The present article presents calculations of GDP for Norway 1830-1865. The figures are computed by a production side approach. They are given in current and in fixed prices. Thus, they reflect both annual fluctuations and the long-term trend in production. The article also presents preliminary figures of GDP by expenditures during the period.

The new estimates are spliced with the GDP figures calculated by Statistics Norway from 1865 onwards. Together they give a good indication of short- and long- term economic growth in Norway 1830-2003.

Bibliography

- Aukrust, Odd 1955, *National Accounts: Theoretic Principles*, Statistics Norway: Oslo.
- Bergh, Trond et al 1991, *Norge fra u-land til i-land*, Oslo: Gyldendal.
- Bjerke, Juul 1966, *Trends in Norwegian Economy 1865-1960*, Oslo: Statistics Norway.
- Bjørnland, Dag 1981, *Innenlands samferdsel siden 1800*, Oslo: Transportøkonomisk institutt.
- Bjørsvik, Elisabeth 2003, *Public services in Norway 1830-1865 within the frameworks of historical national accounts*, Jonsson, Gudmundur (ed.), *Nordic Historical National Accounts*, Reykjavik: Institute of History, University of Iceland, 125-136.
- Brautaset, Camilla 2003, *Norwegian Exports 1830-1865: In Perspective of Historical National Accounts*, Bergen: Norwegian School of Economics and Business Administration.
- C. No. 2 1867, *Beretning om Rigets oekonomiske Tilstand i Aarene 1861-1865*, vol. I, Christiania.
- Department of Finance 1839, *Statistiske Tabeller for Kongeriget Norge*, vol. II, Christiania.
- Department of Finance 1843, *Beretning om Kongeriget Norges oekonomiske Tilstand i Aarene 1836-1840*, Christiania.
- Grytten, Ola Honningdal & Fritz Hodne 1997, *Historical National Accounting in Norway. Notes on Previous Work and Present Challenges*, Eloranta, jari (ed), *Nordiska Historiska Nationalräkenskaper*, Jyväskylä, Jyväskylä University, 7-30.
- Grytten, Ola Honningdal & Kjell Bjørn Minde 1998, *The Demand for Consumer Goods in the Modernisation of the Norwegian Economy 1850-1920*, *Scandinavian Economic History Review*, 1/1998, 42-58.

Grytten, Ola Honningdal 2001, Deflateringsprinsipper for nordiske historiske nasjonalregnskaper, Lindmark, Magnus & Peter Vikström (eds), *Nordic Historical National Accounts*, Occasional Papers in Economic History, Umeå: Umeå University, 21-46.

Grytten, Ola Honningdal 2004A, Output, Input and Value Added in Norwegian Agriculture 1830-1865, Gudmundur Jonsson (ed), *Nordic Historical National Accounts*, Reykjavik: Reykjavik University.

Grytten, Ola Honningdal 2004B, A Deflator for Private Consumption in Norway 1819-1871, Gudmundur Jonsson (ed), *Nordic Historical National Accounts*, Reykjavik: Reykjavik University.

Hasund, Sigvald 1914, Jordbrukstøllingen i 1835, *Tidsskrift for det norske Landbruk*, 1/1914.

Hasund, Sigvald 1932, *Vårt landbruks historie*, Oslo: Aschehoug.

Hjerppe, Riitta 1996, *Finland's Historical national Accounts 1860-1994*, Jyväskylä: Jyväskylä University.

Hodne, Fritz & Ola Honningdal Grytten 1994, Gross Domestic Product of Norway, Krantz, Olle (ed), *Nordiska Historiska Nationalräkenskaper*, Occasional Papers in Economic History, Umeå: Umeå University, 93-113.

Hodne, Fritz & Ola Honningdal Grytten 2000, *Norsk økonomi det nittende århundre*, Bergen: Fagbokforlaget.

Hodne, Fritz 1981, *Norges økonomiske historie 1815-1970*, Oslo: Cappelen.

Hodne, Fritz 1984, *Stortingssalen som markeds plass: Statens grunnlagsinvesteringer 1840-1914*, Oslo: Universitetsforlaget.

Hodne, Fritz, Ola Honningdal Grytten & Jørund Alme 1995, Norwegian Real Wages: Trends in Prices and Wages, 1850-1950, Scholliers, Peter & Vera Zamagni (eds), *Labour's Reward. Real Wages and Economic Change in 19th and 20th Century Europe*, London: Edward Elgar, 61-75 and 238-248.

Hovland, Edgar 1978, Åkerbruket i Norge i begynnelsen av 1800-tallet, *Historisk tidsskrift*, 4/1978, 331-346.

Hovland, Edgar 1987, Grotid og glanstid 1837-1920, Næss, Hans Eyvind et al, *Folkestyre i by og bygd. Norske kommuner gjennom 150 år*, Oslo: Universitetsforlaget.

Kiær, Anders Nicolai 1871, *Statistiske Oplysninger vedkommende Den Norske Skibsfarts Økonomi*, Kristiania: Mallings Forlagsboghandel.

Kiær, Anders Nicolai 1887, Nogle bidrag til bedømmelsen af den økonomiske udvikling med særlig hensyn til Norge, *Statsøkonomisk Tidsskrift*, 193-205.

Klovland, Jan Tore 1984, *Quantitative Studies in the Monetary History of Norway*, manuscript, Bergen: Norwegian School of Economics and Business Administration.

Krantz, Olle 2001, *Swedish Historical National Accounts 1800-1998 – Aggregated Output Series*, Umeå: Umeå University.

Lønningdal, Torill 1984, Tjenestelønninger i jordbruket. *En studie av tjenestelønninger på 17 større gårder i østlandsområdet 1850-1910*, Bergen: Norwegian School of Economics and Business Administration.

Maddison, Angus 1995, *Monitoring the World Economy 1820-1992*, Paris: OECD.

NOS 1886, *Statistical Yearbook 1885-1886*, Kristiania: Statistics Norway.

NOS 1886, *Statistical Yearbook for Norway 1885/1886*, Kristiania: Statistics Norway.

- NOS 1893, *Statistical Yearbook 1893*, Kristiania: Statistics Norway.
- NOS 1893, *Statistical Yearbook for Norway 1893*, Kristiania: Statistics Norway.
- NOS A 24 1961, *National Accounts 1938 and 1946-1958*, Oslo: Statistics Norway.
- NOS A 95 1964, *National Accounts 1949-1962*, Oslo: Statistics Norway.
- NOS C 188 1994, *Historical Statistics 1994*, Oslo: Statistics Norway.
- NOS C 426 1997, *Nasjonalregnskapsstatistikk 1978-1996*, Oslo: Statistics Norway.
- NOS VI 23 1915, *Markedspriser paa Korn og Poteter 1836-1914*, Kristiania: Statistics Norway.
- NOS X 102 1946, *Nasjonalinntekten i Norge*, Oslo: Statistics Norway.
- NOS X. 178 1949, *Statistical Survey 1948*, Oslo: Statistics Norway.
- NOS XI 109 1952, *National Accounts 1930-1939 and 1946-1951*, Oslo: Statistics Norway.
- NOS XI 143 1953, *National Accounts 1900-1929*, Oslo: Statistics Norway.
- NOS XII 163 1965, *National Accounts 1865-1960*, Oslo: Statistics Norway.
- NOS XII 291 1978, *Historical Statistics 1978*, Oslo: Statistics Norway.
- NOS XII 245 1969, *Historical Statistics 1968*, Oslo: Statistics Norway.
- OEEC 1953, *National Accounts Studies*. Norway, Paris: NARU.
- Schweigaard, Anton Martin 1840, *Norges Statistik*, Kristiania.

Seip, Jens Arup 1949, *Kommunenes økonomi*, Oslo: Tiden.

Smits, Jan-Pieter, Edwin Horlings and Jan L. van Zanden 2000, *Dutch GNP and its Components*, Groningen: Groningen Growth and Development Centre.

Solhaug 1976, *De norske fiskeriers historie 1815-1880*, Oslo: Universitetsforlaget.

Solhaug, Trygve 1994, *Hovedtrekkene i fiskerinæringens utvikling 1870-1920*, Bodø: Høgskolesenteret i Nordland.

Tvethe, Anders Braun 1848, *Norges Statistikk*, Kristiania.

Wallem, Fredrik Meltzer 1893, *Handelen med tørrfisk og klippfisk*, Kristiania: Fabritius.

Other sources

The City Archive of Bergen, files on Bergen Price Courant 1815-1865.

The Professor Ingvar Wedervang Historical Archive on Wages and Prices, files W 14, W 16, W 17, W 18, W 20, W 137, W 139, W 269, W 271, W 272, W 273, W 383, W 396

www.ssb.no/emner/09/01/nr/

Table 4: GDP for Norway 1830-1865.

	GDP (mill NOK)	GDP per capita (NOK)	Deflator	GDP (mill NOK)	GDP per capita (NOK)
	Current prices		1830=100	1830=prices	
1830	180	160	100.0	180	160
1831	190	167	113.4	167	147
1832	177	154	103.1	172	149
1833	180	154	93.3	193	166
1834	174	148	85.5	203	173
1835	180	151	89.5	201	169
1836	190	158	96.3	197	164
1837	194	159	97.0	200	164
1838	204	167	101.3	202	165
1839	208	168	102.3	203	165
1840	216	174	97.0	223	179
1841	191	152	83.3	229	182
1842	183	144	78.5	233	183
1843	196	153	85.3	230	179
1844	209	160	88.1	237	182
1845	222	169	88.8	250	190
1846	242	181	93.6	258	193
1847	278	206	111.2	250	185
1848	236	173	98.9	239	175
1849	233	169	94.5	247	179
1850	240	172	93.8	255	183
	Current prices		1861=100	1861=prices	
1850	240	172	73.6	326	234
1851	260	185	74.4	350	248
1852	274	192	78.4	350	245
1853	302	210	81.8	369	256
1854	363	249	94.8	383	263
1855	393	266	96.4	408	276
1856	413	275	101.8	406	270
1857	395	260	101.9	388	255
1858	373	241	91.5	407	264
1859	378	241	89.5	422	269
1860	421	264	94.8	444	278
1861	436	270	100.0	436	270
1862	455	279	95.4	477	293
1863	441	268	91.3	483	293
1864	457	274	90.2	507	304
1865	480	284	89.8	535	316

Sources, 1830-1865: Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A
1865-2003: Data from Statistics Norway.

Table 5. GDP for Norway by expenditure 1830-2003 in current prices (mill NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1830	169	8	13	35	45	180	160	1 123 733
1831	176	9	14	35	44	190	167	1 137 417
1832	168	8	12	36	47	177	154	1 150 463
1833	166	9	15	40	50	180	155	1 163 178
1834	164	9	12	37	48	174	148	1 174 762
1835	168	10	15	37	50	180	151	1 188 130
1836	171	10	19	41	51	190	158	1 202 404
1837	172	10	19	42	49	194	160	1 213 908
1838	168	13	22	42	41	204	167	1 224 163
1839	173	13	24	48	50	208	169	1 232 622
1840	184	14	21	50	53	216	174	1 241 140
1841	173	11	16	44	53	191	152	1 254 405
1842	168	12	17	41	55	183	144	1 270 597
1843	176	13	18	46	57	196	152	1 286 193
1844	179	14	22	60	66	209	161	1 301 772
1845	194	14	24	59	69	222	168	1 319 185
1846	206	15	25	64	68	242	181	1 336 728
1847	235	17	26	70	70	278	206	1 351 331
1848	211	15	21	53	64	236	173	1 363 384
1849	205	15	23	60	70	233	169	1 376 619
1850	210	15	25	59	69	240	172	1 391 941
1851	220	16	31	66	73	260	185	1 408 903
1852	233	16	34	66	75	274	192	1 425 472
1853	253	17	40	79	87	302	210	1 439 756
1854	295	18	56	100	106	363	249	1 457 020
1855	313	19	64	105	108	393	266	1 478 723
1856	335	19	63	109	113	413	275	1 500 611
1857	327	19	51	102	104	395	260	1 520 744
1858	315	20	48	85	95	373	242	1 543 194
1859	325	18	42	93	100	378	241	1 569 801
1860	345	20	50	108	102	421	264	1 596 089
1861	358	19	64	117	122	436	270	1 613 878
1862	375	20	66	116	122	455	280	1 626 986
1863	380	19	52	119	129	441	268	1 646 433
1864	392	18	54	123	130	457	274	1 668 254
1865	402	19	62	127	130	480	284	1 690 133
1866	411	20	66	126	131	492	288	1 707 272
1867	424	21	67	131	125	518	302	1 716 860
1868	438	21	68	131	134	524	304	1 725 088
1869	429	20	65	149	126	537	310	1 730 949
1870	436	21	66	158	139	542	312	1 736 909
1871	447	22	70	163	140	562	322	1 746 353
1872	504	22	96	200	182	640	364	1 756 929
1873	570	24	123	235	223	729	412	1 769 421
1874	626	26	145	237	244	790	442	1 786 640

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953), 1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 5. GDP for Norway by expenditure 1830-2003 in current prices (mill NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1875	628	29	140	203	229	771	426	1 807 803
1876	627	30	136	230	224	799	437	1 828 856
1877	657	32	136	216	244	797	430	1 851 572
1878	564	28	111	195	192	706	376	1 876 835
1879	530	30	98	185	181	662	348	1 902 126
1880	573	30	106	215	204	720	375	1 919 075
1881	596	31	108	220	216	739	384	1 922 948
1882	594	32	114	237	217	760	396	1 919 767
1883	600	32	113	227	222	750	391	1 919 317
1884	581	31	106	214	211	721	374	1 929 058
1885	551	32	97	193	194	679	349	1 943 917
1886	536	33	92	187	181	667	341	1 958 323
1887	519	34	94	192	180	659	335	1 969 807
1888	559	34	104	224	211	710	359	1 976 615
1889	601	36	126	263	256	770	388	1 984 295
1890	622	36	139	254	271	780	391	1 996 929
1891	667	37	138	243	283	802	399	2 012 504
1892	652	41	130	234	258	799	394	2 026 016
1893	656	43	132	238	260	809	397	2 037 797
1894	666	44	134	234	262	816	397	2 056 657
1895	683	48	140	240	279	832	399	2 083 088
1896	717	55	143	261	301	875	414	2 111 676
1897	737	58	162	289	327	919	429	2 141 721
1898	808	60	189	287	346	998	459	2 173 807
1899	857	69	220	301	382	1 065	483	2 204 084
1900	895	71	208	330	389	1 115	500	2 230 483
1901	889	73	194	303	358	1 101	488	2 254 911
1902	880	73	183	309	357	1 088	478	2 275 485
1903	881	71	172	314	357	1 081	473	2 287 768
1904	860	69	182	333	363	1 081	471	2 297 494
1905	888	70	174	356	383	1 105	479	2 308 572
1906	931	71	206	398	419	1 187	512	2 319 191
1907	992	74	243	400	444	1 265	543	2 328 962
1908	1 026	76	248	387	438	1 299	554	2 345 564
1909	1 044	80	228	411	447	1 316	556	2 367 494
1910	1 108	84	263	470	490	1 435	602	2 383 677
1911	1 172	88	317	519	566	1 530	637	2 400 796
1912	1 260	101	359	598	638	1 680	693	2 423 184
1913	1 355	108	384	688	678	1 857	759	2 446 874
1914	1 416	127	396	675	695	1 919	776	2 472 419
1915	1 785	157	513	1 189	1 050	2 594	1 039	2 497 766
1916	2 464	200	811	2 125	1 729	3 871	1 535	2 522 178
1917	3 194	290	1 086	1 976	2 057	4 489	1 760	2 550 543
1918	3 712	394	792	1 730	1 580	5 048	1 958	2 577 729
1919	4 574	464	2 218	1 899	2 960	6 195	2 380	2 602 869
1920	5 524	525	2 297	2 649	3 495	7 500	2 847	2 634 664

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kiær 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørmland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),

1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 5. GDP for Norway by expenditure 1830-2003 in current prices (mill NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1921	4 115	554	1 290	1 289	1 800	5 448	2 042	2 667 867
1922	3 755	520	961	1 348	1 604	4 980	1 848	2 694 840
1923	3 793	465	961	1 432	1 654	4 997	1 842	2 713 117
1924	4 250	448	1 020	1 742	1 884	5 576	2 043	2 728 766
1925	4 166	434	1 052	1 693	1 712	5 633	2 051	2 746 815
1926	3 416	397	797	1 403	1 367	4 646	1 681	2 763 106
1927	3 161	373	685	1 247	1 248	4 218	1 520	2 774 866
1928	3 147	350	793	1 217	1 286	4 221	1 516	2 784 674
1929	3 146	338	847	1 352	1 338	4 345	1 555	2 795 105
1930	3 050	330	1 005	1 300	1 308	4 377	1 559	2 807 439
1931	2 839	322	741	1 016	1 076	3 842	1 361	2 823 882
1932	2 778	307	649	1 026	898	3 862	1 359	2 841 528
1933	2 749	301	654	1 052	890	3 866	1 353	2 858 343
1934	2 865	307	771	1 102	977	4 068	1 415	2 874 206
1935	3 024	328	923	1 163	1 076	4 362	1 510	2 889 211
1936	3 256	356	1 081	1 347	1 190	4 850	1 670	2 903 519
1937	3 651	384	1 414	1 760	1 628	5 581	1 912	2 918 742
1938	3 797	418	1 473	1 682	1 543	5 827	1 985	2 935 803
1939	4 099	526	1 600	1 768	1 740	6 253	2 116	2 954 415
1940								2 973 067
1941								2 990 234
1942								3 008 883
1943								3 032 429
1944								3 060 211
1945								3 091 177
1946	6 739	1 286	3 347	2 651	3 245	10 778	3 447	3 126 883
1947	7 936	1 242	4 721	3 847	5 059	12 687	4 009	3 165 011
1948	8 264	1 256	5 078	4 485	5 179	13 904	4 344	3 201 012
1949	9 082	1 349	5 660	4 674	5 848	14 917	4 612	3 234 227
1950	9 934	1 467	5 815	6 035	6 826	16 425	5 030	3 265 125
1951	11 156	1 837	7 115	9 114	8 766	20 456	6 207	3 295 871
1952	12 411	2 266	7 832	9 062	9 007	22 564	6 781	3 327 728
1953	13 089	2 577	8 073	8 236	9 091	22 884	6 809	3 360 888
1954	14 019	2 746	9 140	8 842	9 941	24 806	7 308	3 394 246
1955	14 718	2 711	9 675	10 130	10 858	26 376	7 694	3 428 200
1956	15 733	3 067	10 695	12 306	12 054	29 747	8 595	3 460 782
1957	16 638	3 355	11 465	13 290	12 973	31 775	9 100	3 491 938
1958	17 238	3 540	12 044	11 981	12 884	31 919	9 060	3 522 994
1959	18 320	3 862	12 084	12 826	13 146	33 946	9 555	3 552 854
1960	19 562	4 249	9 573	13 651	14 252	33 058	9 231	3 581 239
1961	21 301	4 633	10 821	14 355	15 457	36 062	9 990	3 609 800
1962	22 929	5 431	11 333	14 941	15 923	38 843	10 674	3 638 918
1963	24 407	5 977	12 296	16 362	17 278	41 682	11 368	3 666 537
1964	26 498	6 634	12 779	18 805	18 872	45 837	12 407	3 694 339
1965	28 297	7 608	14 275	20 570	21 023	45 837	12 311	3 723 168
1966	30 327	8 438	15 634	22 256	23 084	50 563	13 473	3 753 012

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kiær 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørmland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),

1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 5. GDP for Norway by expenditure 1830-2003 in current prices (mill NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1967	32 916	9 615	17 703	25 017	26 122	54 568	14 419	3 784 539
1968	35 182	10 562	17 122	27 490	26 208	63 749	16 704	3 816 486
1969	39 218	11 674	16 866	29 368	27 858	69 418	18 041	3 847 707
1970	47 048	14 791	24 508	33 272	33 800	91 100	23 505	3 875 763
1971	52 806	17 348	30 194	35 647	38 211	101 825	26 089	3 903 039
1972	57 952	19 555	31 579	39 817	38 895	112 821	28 686	3 933 004
1973	64 389	22 351	37 445	48 417	48 854	127 974	32 312	3 960 613
1974	72 620	26 120	45 772	59 705	63 668	148 322	37 218	3 985 258
1975	85 086	31 530	57 527	61 797	71 661	169 896	42 396	4 007 313
1976	97 840	37 374	70 120	70 254	86 549	193 812	48 138	4 026 152
1977	112 991	42 587	79 282	75 425	95 429	218 484	54 037	4 043 205
1978	119 892	48 010	74 601	87 359	86 354	239 951	59 121	4 058 671
1979	131 481	51 771	78 910	105 147	98 739	264 802	65 022	4 072 517
1980	146 664	59 773	84 411	135 491	116 136	314 363	76 944	4 085 620
1981	165 794	69 220	96 620	155 411	128 883	358 176	87 366	4 099 702
1982	186 189	77 821	107 619	164 672	143 934	396 186	96 283	4 114 787
1983	205 619	86 318	121 815	184 515	149 169	439 023	106 341	4 128 432
1984	225 601	92 926	129 962	213 023	168 408	494 457	119 431	4 140 099
1985	261 243	101 211	134 922	235 046	194 104	547 286	131 796	4 152 516
1986	292 660	110 944	155 389	194 066	213 294	561 842	134 820	4 167 354
1987	312 868	127 327	170 915	199 787	213 185	613 157	146 446	4 186 905
1988	325 167	134 538	181 428	213 858	217 232	643 375	152 839	4 209 488
1989	338 778	142 703	175 057	262 658	237 459	686 034	162 302	4 226 901
1990	357 100	154 193	156 210	293 752	246 359	726 799	171 355	4 241 473
1991	378 939	167 619	152 206	308 046	246 367	769 782	180 627	4 261 732
1992	396 793	179 707	151 087	300 094	245 806	790 300	184 374	4 286 401
1993	416 228	187 473	164 126	315 960	261 669	830 416	192 583	4 311 991
1994	435 350	193 832	174 378	333 197	279 183	873 410	201 404	4 336 613
1995	462 262	202 144	186 548	355 948	297 498	937 445	215 051	4 359 184
1996	498 965	214 675	208 603	419 402	326 797	1 026 924	234 386	4 381 336
1997	527 135	227 490	245 695	460 864	368 701	1 111 349	252 284	4 405 157
1998	554 540	247 435	284 904	427 081	405 617	1 132 134	255 476	4 431 464
1999	584 272	263 730	271 828	486 232	393 755	1 233 039	276 348	4 461 913
2000	625 501	281 117	272 766	685 951	431 304	1 469 075	327 118	4 490 967
2001	651 339	314 795	278 937	697 297	436 812	1 526 233	338 130	4 513 751
2002	679 956	336 838	269 330	626 409	416 698	1 522 176	335 417	4 538 159
2003	721 909	353 251	261 301	646 435	433 497	1 563 689	342 550	4 564 855

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),

1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 6. GDP for Norway by expenditure 1830-2003 in fixed prices (mill 2000-NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1830	9 545	1 136	1 671	741	870	12 206	10 862	1 123 733
1831	9 405	949	1 510	734	840	11 354	9 982	1 137 417
1832	9 218	1 010	1 456	801	870	11 638	10 116	1 150 463
1833	9 873	1 136	1 725	903	932	13 057	11 225	1 163 178
1834	10 669	1 215	2 048	859	870	13 766	11 718	1 174 762
1835	10 996	1 215	1 994	881	790	13 625	11 467	1 188 130
1836	10 715	1 215	1 779	903	957	13 388	11 134	1 202 404
1837	10 575	1 239	1 886	977	1 092	13 530	11 146	1 213 908
1838	9 920	1 432	1 725	911	1 081	13 672	11 168	1 224 163
1839	10 295	1 511	1 833	1 022	1 202	13 766	11 168	1 232 622
1840	11 137	1 466	2 048	1 126	1 202	15 091	12 159	1 241 140
1841	12 306	1 590	2 263	1 044	1 194	15 517	12 370	1 254 405
1842	13 570	1 659	2 426	1 059	1 322	15 801	12 436	1 270 597
1843	13 149	1 625	2 263	1 007	1 262	15 611	12 137	1 286 193
1844	13 149	1 636	2 426	1 237	1 475	16 085	12 356	1 301 772
1845	13 991	1 636	2 587	1 185	1 329	16 983	12 874	1 319 185
1846	13 991	1 534	2 803	1 289	1 572	17 504	13 094	1 336 728
1847	13 336	1 545	2 447	1 385	1 341	16 983	12 568	1 351 331
1848	13 570	1 625	2 102	1 126	1 499	16 178	11 866	1 363 384
1849	13 289	1 590	2 263	1 296	1 582	16 746	12 165	1 376 619
1850	13 991	1 715	2 480	1 348	1 650	17 314	12 439	1 391 941
1851	14 833	1 738	2 803	1 511	1 625	18 591	13 196	1 408 903
1852	14 927	1 704	2 534	1 504	1 630	18 591	13 042	1 425 472
1853	15 536	1 670	2 749	1 793	1 835	19 633	13 636	1 439 756
1854	16 377	1 670	3 072	1 860	2 048	20 389	13 994	1 457 020
1855	16 565	1 670	3 234	2 045	2 291	21 714	14 684	1 478 723
1856	16 705	1 500	2 964	2 193	2 503	21 572	14 375	1 500 611
1857	16 658	1 579	2 587	2 082	2 369	20 626	13 563	1 520 744
1858	17 594	1 818	3 018	1 889	1 690	21 667	14 040	1 543 194
1859	18 249	1 749	3 288	2 208	2 096	22 471	14 315	1 569 801
1860	19 092	1 818	3 558	2 453	2 363	23 606	14 790	1 596 089
1861	18 623	1 601	3 234	2 607	2 946	23 180	14 363	1 613 878
1862	20 027	1 704	3 665	2 666	2 829	25 357	15 585	1 626 986
1863	21 010	1 875	3 827	2 918	2 989	25 687	15 602	1 646 433
1864	21 431	1 682	3 934	3 267	2 867	26 965	16 163	1 668 254
1865	22 273	1 704	4 096	3 311	3 358	28 431	16 822	1 690 133
1866	22 708	1 762	4 252	3 320	3 380	28 958	16 962	1 707 272
1867	22 803	1 762	4 252	3 572	3 295	29 672	17 283	1 716 860
1868	23 187	1 696	4 359	3 499	3 508	29 637	17 180	1 725 088
1869	23 512	1 762	4 301	3 873	3 449	30 779	17 782	1 730 949
1870	23 917	1 765	4 400	3 908	3 895	30 705	17 678	1 736 909
1871	24 298	1 907	4 631	3 898	3 942	31 244	17 891	1 746 353
1872	25 333	1 696	5 165	4 646	4 436	33 279	18 942	1 756 929
1873	26 597	1 696	5 864	4 573	5 058	34 064	19 252	1 769 421
1874	27 996	1 835	6 398	4 549	5 492	35 350	19 786	1 786 640

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953), 1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 6. GDP for Norway by expenditure 1830-2003 in fixed prices (mill 2000-NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1875	29 074	2 045	6 570	4 355	5 507	36 391	20 130	1 807 803
1876	29 357	2 119	6 670	4 744	5 560	37 421	20 461	1 828 856
1877	30 717	2 331	6 883	4 646	6 369	37 706	20 364	1 851 572
1878	29 319	2 186	6 077	4 467	5 560	36 385	19 386	1 876 835
1879	29 223	2 610	5 806	4 622	5 492	36 707	19 298	1 902 126
1880	29 549	2 398	6 291	5 240	5 901	37 885	19 741	1 919 075
1881	30 258	2 471	6 456	5 191	6 207	38 242	19 887	1 922 948
1882	30 104	2 471	6 670	5 273	6 369	38 171	19 883	1 919 767
1883	30 852	2 543	6 728	5 118	6 829	38 028	19 813	1 919 317
1884	31 139	2 683	6 514	5 419	6 889	38 706	20 065	1 929 058
1885	31 465	2 822	6 291	5 395	6 769	39 063	20 095	1 943 917
1886	31 139	2 962	6 136	5 541	6 582	39 278	20 057	1 958 323
1887	31 043	3 107	6 398	5 696	6 582	39 777	20 193	1 969 807
1888	32 691	3 107	7 048	6 192	7 451	41 634	21 063	1 976 615
1889	34 147	3 107	7 961	6 713	8 540	43 241	21 792	1 984 295
1890	35 316	3 174	8 174	6 843	8 847	44 419	22 244	1 996 929
1891	36 236	3 107	8 339	6 713	9 094	44 848	22 285	2 012 504
1892	36 198	3 458	8 174	6 868	8 753	45 705	22 559	2 026 016
1893	37 041	3 742	8 446	7 120	9 094	46 919	23 024	2 037 797
1894	38 536	3 882	8 718	6 746	9 656	47 205	22 952	2 056 657
1895	39 609	4 233	9 310	6 689	10 431	47 776	22 935	2 083 088
1896	41 448	4 802	9 145	7 063	11 367	49 133	23 267	2 111 676
1897	42 617	5 081	10 164	7 820	12 074	51 739	24 158	2 141 721
1898	43 690	4 942	11 194	7 242	12 330	52 168	23 998	2 173 807
1899	44 917	5 432	11 999	7 218	12 730	53 775	24 398	2 204 084
1900	45 185	5 366	11 087	7 413	12 168	54 453	24 413	2 230 483
1901	45 377	5 577	11 194	7 714	11 921	55 810	24 750	2 254 911
1902	45 798	5 717	10 378	8 414	12 108	56 667	24 903	2 275 485
1903	46 258	5 644	9 951	8 438	12 389	56 310	24 614	2 287 768
1904	45 147	5 505	10 543	8 861	12 389	56 417	24 556	2 297 494
1905	45 990	5 432	9 844	9 292	12 764	56 845	24 623	2 308 572
1906	46 776	5 366	11 194	10 017	13 386	59 202	25 527	2 319 191
1907	48 098	5 366	12 805	9 935	13 411	61 773	26 524	2 328 962
1908	49 305	5 432	13 019	10 334	13 564	63 737	27 173	2 345 564
1909	50 052	5 856	12 533	11 009	13 879	65 129	27 510	2 367 494
1910	51 892	5 929	14 252	11 734	15 216	67 807	28 446	2 383 677
1911	53 425	6 068	16 514	12 539	16 860	70 450	29 344	2 400 796
1912	54 747	6 637	18 290	13 434	17 788	73 913	30 502	2 423 184
1913	56 893	6 777	18 989	15 005	19 005	77 912	31 841	2 446 874
1914	58 024	7 836	18 882	14 679	18 750	79 519	32 162	2 472 419
1915	62 182	8 188	20 115	15 558	21 177	83 019	33 237	2 497 766
1916	69 675	8 327	22 542	15 680	24 438	86 232	34 190	2 522 178
1917	63 600	8 472	20 552	10 562	17 915	78 377	30 730	2 550 543
1918	59 327	9 314	18 776	9 162	12 142	75 234	29 186	2 577 729
1919	73 469	10 871	22 591	10 066	26 916	88 125	33 857	2 602 869
1920	74 274	10 374	25 125	13 581	24 685	93 909	35 644	2 634 664

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kiær 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørmland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),

1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 6. GDP for Norway by expenditure 1830-2003 in fixed prices (mill 2000-NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1921	63 351	12 633	18 242	11 408	16 272	84 804	31 787	2 667 867
1922	70 901	14 540	17 426	14 679	20 402	93 909	34 848	2 694 840
1923	72 951	13 269	19 581	15 680	21 858	96 444	35 547	2 713 117
1924	71 648	11 361	20 873	16 632	21 730	96 409	35 331	2 728 766
1925	73 009	11 434	22 377	18 276	21 858	102 336	37 256	2 746 815
1926	73 277	12 772	20 232	19 529	22 105	103 871	37 592	2 763 106
1927	76 516	13 620	20 766	21 124	24 191	107 799	38 848	2 774 866
1928	79 237	13 269	25 610	21 498	25 928	112 548	40 417	2 784 674
1929	83 682	13 481	28 620	25 070	28 006	123 189	44 073	2 795 105
1930	87 381	13 999	31 455	27 178	30 228	132 473	47 186	2 807 439
1931	85 081	14 780	28 251	23 923	28 951	122 118	43 245	2 823 882
1932	85 273	14 669	24 465	25 713	22 905	128 188	45 112	2 841 528
1933	86 614	14 613	24 562	27 096	23 416	131 401	45 971	2 858 343
1934	88 722	14 836	27 086	28 154	25 885	136 043	47 332	2 874 206
1935	92 363	15 282	31 357	29 131	28 440	142 828	49 435	2 889 211
1936	96 387	15 673	36 017	31 897	30 143	152 468	52 511	2 903 519
1937	101 178	15 896	41 163	34 989	37 040	159 253	54 562	2 918 742
1938	102 519	17 513	41 066	34 989	35 848	162 823	55 461	2 935 803
1939	108 651	20 414	43 493	36 454	39 084	170 679	57 771	2 954 415
1940						156 205	52 540	2 973 067
1941						159 992	53 505	2 990 234
1942						153 775	51 107	3 008 883
1943						150 708	49 699	3 032 429
1944						142 838	46 676	3 060 211
1945						160 063	51 781	3 091 177
1946	112 484	32 517	42 910	19 936	31 165	176 392	56 411	3 126 883
1947	123 215	31 011	57 084	26 934	41 212	200 316	63 291	3 165 011
1948	125 131	28 836	57 181	31 083	38 232	214 241	66 929	3 201 012
1949	131 263	30 732	61 162	33 769	44 022	219 955	68 009	3 234 227
1950	134 137	32 070	61 841	40 441	46 236	230 667	70 646	3 265 125
1951	134 329	36 309	61 938	44 835	48 706	243 164	73 778	3 295 871
1952	139 694	39 879	65 142	43 940	47 343	251 734	75 647	3 327 728
1953	145 251	44 676	71 452	46 707	50 579	261 732	77 876	3 360 888
1954	149 659	46 572	75 239	51 101	55 603	274 943	81 003	3 394 246
1955	154 258	44 620	79 219	54 518	59 605	281 013	81 971	3 428 200
1956	158 857	45 958	80 384	59 970	63 862	296 010	85 533	3 460 782
1957	162 498	47 743	83 976	62 492	64 714	304 937	87 326	3 491 938
1958	163 073	49 305	88 150	63 550	66 928	304 937	86 556	3 522 994
1959	169 779	51 815	86 694	69 490	69 737	317 791	89 447	3 552 854
1960	183 693	54 062	82 160	76 368	77 469	335 672	93 731	3 581 239
1961	194 363	57 551	92 338	81 798	85 312	356 711	98 817	3 609 800
1962	200 320	60 358	95 948	86 988	89 879	366 756	100 787	3 638 918
1963	207 166	64 329	99 597	94 088	95 305	380 782	103 853	3 666 537
1964	214 902	68 460	102 882	101 725	102 020	399 736	108 202	3 694 339
1965	220 147	74 836	109 857	107 333	111 261	420 964	113 066	3 723 168
1966	228 061	77 162	116 386	113 419	119 910	436 885	116 409	3 753 012

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kiær 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørmland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),

1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 6. GDP for Norway by expenditure 1830-2003 in fixed prices (mill 2000-NOK). GDP per capita is reported in NOK.

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP (mill NOK)	GDP per capita (NOK)	Middle population
1967	236 863	84 381	130 093	122 965	133 986	464 179	122 651	3 784 539
1968	245 488	87 951	126 119	132 391	136 940	474 603	124 356	3 816 486
1969	264 337	92 162	115 291	139 432	139 465	496 021	128 913	3 847 707
1970	264 337	97 937	132 445	139 551	158 376	505 877	130 523	3 875 763
1971	279 091	104 260	154 732	141 732	169 144	531 831	136 261	3 903 039
1972	286 739	108 708	150 223	161 047	167 741	558 918	142 110	3 933 004
1973	296 877	113 755	168 280	173 525	193 289	583 584	147 347	3 960 613
1974	305 679	117 588	178 639	174 908	201 752	608 049	152 575	3 985 258
1975	322 348	126 281	196 994	181 532	210 216	639 837	159 667	4 007 313
1976	341 650	133 826	216 664	203 769	237 576	677 351	168 238	4 026 152
1977	363 209	139 144	223 128	208 941	242 638	706 257	174 678	4 043 205
1978	357 159	144 613	198 420	229 892	204 123	730 889	180 081	4 058 671
1979	372 186	151 665	202 232	235 342	205 926	763 642	187 511	4 072 517
1980	379 639	159 926	197 616	246 258	211 459	801 438	196 161	4 085 620
1981	380 164	168 009	205 150	250 492	214 596	809 180	197 375	4 099 702
1982	384 152	171 118	206 689	250 792	225 676	810 868	197 062	4 114 787
1983	391 268	176 158	217 819	268 511	218 791	839 904	203 444	4 128 432
1984	403 671	177 911	219 895	289 661	231 449	889 515	214 854	4 140 099
1985	441 440	181 960	211 178	310 651	252 067	935 763	225 348	4 152 516
1986	463 366	185 674	227 326	317 610	281 719	969 447	232 629	4 167 354
1987	459 587	194 278	228 110	321 104	263 471	989 371	236 301	4 186 905
1988	450 257	194 716	224 002	341 545	257 261	988 945	234 932	4 209 488
1989	447 456	198 747	208 607	379 060	262 821	998 403	236 202	4 226 901
1990	450 639	209 378	186 053	411 714	269 446	1 019 224	240 300	4 241 473
1991	460 855	220 681	180 511	436 947	270 661	1 056 082	247 806	4 261 732
1992	470 781	233 031	178 554	457 621	274 911	1 090 933	254 510	4 286 401
1993	482 117	239 252	190 074	472 169	288 248	1 120 664	259 895	4 311 991
1994	498 104	242 809	200 121	511 988	304 946	1 179 569	272 002	4 336 613
1995	516 417	246 542	207 973	536 958	322 312	1 230 967	282 385	4 359 184
1996	549 964	254 116	229 440	591 989	350 646	1 295 644	295 719	4 381 336
1997	567 769	260 443	265 054	637 770	394 247	1 362 871	309 381	4 405 157
1998	582 832	268 987	299 701	641 520	427 592	1 398 708	315 631	4 431 464
1999	601 820	277 475	283 014	659 653	419 912	1 428 546	320 164	4 461 913
2000	625 501	281 117	272 766	685 951	431 304	1 469 075	327 118	4 490 967
2001	636 644	297 430	270 820	720 436	435 339	1 509 127	334 340	4 513 751
2002	659 641	306 510	261 676	721 023	445 313	1 529 905	337 120	4 538 159
2003	684 067	310 458	255 226	722 003	453 550	1 534 486	336 152	4 564 855

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A

1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),

1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 7. Implicit price deflators (2000=100).

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP
1830	1.93	0.81	0.66	4.67	5.03	1.54
1831	2.04	1.10	0.78	4.72	5.10	1.75
1832	1.99	0.92	0.69	4.45	5.25	1.59
1833	1.84	0.92	0.73	4.38	5.22	1.44
1834	1.68	0.86	0.49	4.26	5.37	1.32
1835	1.67	0.95	0.63	4.15	6.16	1.38
1836	1.74	0.95	0.90	4.49	5.18	1.48
1837	1.78	0.93	0.85	4.25	4.36	1.50
1838	1.85	1.05	1.08	4.56	3.69	1.56
1839	1.83	0.99	1.10	4.64	4.05	1.58
1840	1.80	1.10	0.86	4.39	4.29	1.49
1841	1.54	0.80	0.60	4.17	4.32	1.28
1842	1.35	0.84	0.59	3.83	4.05	1.21
1843	1.46	0.93	0.67	4.52	4.39	1.31
1844	1.49	0.99	0.76	4.80	4.35	1.36
1845	1.51	0.99	0.78	4.92	5.05	1.36
1846	1.61	1.13	0.75	4.91	4.21	1.44
1847	1.92	1.27	0.90	5.00	5.08	1.71
1848	1.70	1.07	0.84	4.65	4.15	1.52
1849	1.68	1.09	0.86	4.58	4.31	1.45
1850	1.64	1.01	0.85	4.33	4.07	1.45
1851	1.62	1.06	0.93	4.32	4.37	1.46
1852	1.70	1.09	1.13	4.34	4.48	1.54
1853	1.78	1.18	1.23	4.36	4.61	1.61
1854	1.97	1.25	1.54	5.32	5.04	1.86
1855	2.06	1.32	1.67	5.08	4.59	1.89
1856	2.19	1.46	1.79	4.92	4.39	2.00
1857	2.14	1.39	1.66	4.85	4.27	2.00
1858	1.95	1.27	1.34	4.45	5.47	1.80
1859	1.94	1.19	1.08	4.17	4.64	1.76
1860	1.97	1.27	1.18	4.35	4.20	1.86
1861	2.10	1.37	1.67	4.44	4.03	1.96
1862	2.04	1.36	1.52	4.30	4.20	1.87
1863	1.97	1.17	1.15	4.03	4.20	1.79
1864	2.00	1.24	1.16	3.72	4.41	1.77
1865	1.97	1.29	1.28	3.79	3.77	1.76
1866	1.98	1.31	1.31	3.75	3.77	1.77
1867	2.03	1.38	1.33	3.63	3.69	1.82
1868	2.06	1.43	1.32	3.70	3.72	1.85
1869	1.99	1.31	1.27	3.80	3.55	1.82
1870	1.99	1.38	1.26	4.00	3.47	1.84
1871	2.01	1.33	1.27	4.14	3.46	1.88
1872	2.17	1.50	1.57	4.26	3.99	2.01
1873	2.34	1.64	1.77	5.08	4.29	2.23
1874	2.44	1.64	1.91	5.15	4.32	2.33
1875	2.36	1.64	1.80	4.61	4.05	2.21

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A
1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953), 1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 7. Implicit price deflators (2000=100).

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP
1876	2.33	1.64	1.72	4.79	3.92	2.23
1877	2.34	1.59	1.67	4.60	3.73	2.21
1878	2.10	1.48	1.54	4.32	3.36	2.03
1879	1.98	1.33	1.42	3.96	3.21	1.88
1880	2.12	1.45	1.42	4.06	3.36	1.98
1881	2.15	1.45	1.41	4.19	3.39	2.02
1882	2.15	1.50	1.44	4.44	3.32	2.08
1883	2.12	1.45	1.42	4.39	3.16	2.06
1884	2.04	1.34	1.37	3.91	2.98	1.94
1885	1.91	1.31	1.30	3.54	2.79	1.81
1886	1.88	1.29	1.26	3.34	2.68	1.77
1887	1.83	1.27	1.24	3.33	2.66	1.73
1888	1.87	1.27	1.24	3.58	2.76	1.78
1889	1.92	1.34	1.33	3.87	2.92	1.86
1890	1.92	1.31	1.43	3.67	2.98	1.83
1891	2.01	1.38	1.40	3.58	3.03	1.87
1892	1.97	1.37	1.34	3.37	2.87	1.82
1893	1.93	1.33	1.32	3.31	2.78	1.80
1894	1.89	1.31	1.30	3.43	2.64	1.80
1895	1.88	1.31	1.27	3.55	2.60	1.82
1896	1.89	1.32	1.32	3.65	2.58	1.86
1897	1.89	1.32	1.34	3.65	2.64	1.85
1898	2.02	1.40	1.42	3.92	2.73	2.00
1899	2.08	1.47	1.55	4.12	2.92	2.07
1900	2.16	1.53	1.58	4.40	3.11	2.14
1901	2.14	1.51	1.46	3.88	2.92	2.06
1902	2.10	1.48	1.49	3.63	2.87	2.00
1903	2.08	1.45	1.46	3.68	2.80	2.00
1904	2.08	1.45	1.46	3.72	2.85	2.00
1905	2.11	1.49	1.49	3.79	2.92	2.03
1906	2.17	1.53	1.55	3.93	3.05	2.09
1907	2.25	1.59	1.60	3.98	3.22	2.14
1908	2.27	1.62	1.61	3.70	3.14	2.13
1909	2.28	1.58	1.53	3.69	3.13	2.11
1910	2.33	1.64	1.56	3.96	3.13	2.21
1911	2.40	1.68	1.62	4.09	3.27	2.27
1912	2.51	1.76	1.65	4.40	3.49	2.37
1913	2.60	1.84	1.70	4.53	3.47	2.49
1914	2.66	1.87	1.77	4.55	3.61	2.52
1915	3.13	2.22	2.15	7.56	4.82	3.26
1916	3.86	2.78	3.03	13.40	6.88	4.69
1917	5.48	3.96	4.45	18.50	11.17	5.98
1918	6.83	4.89	3.56	18.67	12.66	7.00
1919	6.80	4.93	8.28	18.66	10.70	7.34
1920	8.12	5.85	7.71	19.29	13.78	8.34
1921	7.09	5.07	5.96	11.17	10.76	6.71
1922	5.78	4.13	4.65	9.08	7.65	5.54

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A
1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),
1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 7. Implicit price deflators (2000=100).

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP
1923	5.68	4.05	4.14	9.03	7.36	5.41
1924	6.48	4.56	4.12	10.36	8.44	6.04
1925	6.23	4.39	3.96	9.16	7.62	5.75
1926	5.09	3.59	3.32	7.10	6.02	4.67
1927	4.51	3.17	2.78	5.84	5.02	4.08
1928	4.34	3.05	2.61	5.60	4.83	3.91
1929	4.11	2.90	2.50	5.33	4.65	3.68
1930	3.81	2.73	2.69	4.73	4.21	3.45
1931	3.64	2.52	2.21	4.20	3.62	3.28
1932	3.56	2.42	2.24	3.95	3.81	3.14
1933	3.47	2.38	2.24	3.84	3.70	3.07
1934	3.53	2.39	2.40	3.87	3.67	3.12
1935	3.58	2.48	2.48	3.95	3.68	3.19
1936	3.69	2.63	2.53	4.18	3.84	3.32
1937	3.94	2.79	2.90	4.97	4.28	3.66
1938	4.04	2.76	3.02	4.75	4.19	3.74
1939	4.12	2.98	3.10	4.80	4.33	3.82
1940						
1941						
1942						
1943						
1944						
1945						
1946	6.54	4.57	6.58	13.15	10.13	6.38
1947	7.03	4.63	6.97	14.12	11.94	6.61
1948	7.21	5.04	7.49	14.27	13.18	6.77
1949	7.56	5.07	7.80	13.69	12.93	7.08
1950	8.09	5.29	7.93	14.76	14.37	7.43
1951	9.07	5.85	9.68	20.10	17.51	8.78
1952	9.70	6.57	10.14	20.39	18.51	9.36
1953	9.84	6.67	9.53	17.44	17.49	9.13
1954	10.23	6.82	10.24	17.11	17.40	9.42
1955	10.42	7.02	10.30	18.37	17.73	9.80
1956	10.81	7.72	11.22	20.29	18.37	10.49
1957	11.18	8.12	11.51	21.03	19.51	10.88
1958	11.54	8.30	11.52	18.64	18.73	10.93
1959	11.78	8.62	11.75	18.25	18.34	11.15
1960	11.64	8.59	13.47	17.80	18.06	11.23
1961	11.98	8.80	13.55	17.48	17.78	11.52
1962	12.51	9.83	13.66	17.10	17.39	12.07
1963	12.88	10.15	14.27	17.32	17.80	12.48
1964	13.48	10.59	14.36	18.41	18.16	13.07
1965	14.05	11.11	15.02	19.08	18.55	12.41
1966	14.54	11.95	15.53	19.54	18.90	13.19
1967	15.19	12.45	15.73	20.26	19.14	13.40
1968	15.67	13.12	15.70	20.68	18.79	15.31
1969	16.22	13.84	16.91	20.97	19.61	15.95

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A
1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),
1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 7. Implicit price deflators (2000=100).

	Private consumption expenditures	Government consumption	Gross investments	Total exports	Total imports	GDP
1970	17.80	15.10	18.50	23.84	21.34	18.01
1971	18.92	16.64	19.51	25.15	22.59	19.15
1972	20.21	17.99	21.02	24.72	23.19	20.19
1973	21.69	19.65	22.25	27.90	25.28	21.93
1974	23.76	22.21	25.62	34.14	31.56	24.39
1975	26.40	24.97	29.20	34.04	34.09	26.55
1976	28.64	27.93	32.36	34.48	36.43	28.61
1977	31.11	30.61	35.53	36.10	39.33	30.94
1978	33.57	33.20	37.60	38.00	42.30	32.83
1979	35.33	34.14	39.02	44.68	47.95	34.68
1980	38.63	37.38	42.71	55.02	54.92	39.22
1981	43.61	41.20	47.10	62.04	60.06	44.26
1982	48.47	45.48	52.07	65.66	63.78	48.86
1983	52.55	49.00	55.92	68.72	68.18	52.27
1984	55.89	52.23	59.10	73.54	72.76	55.59
1985	59.18	55.62	63.89	75.66	77.00	58.49
1986	63.16	59.75	68.36	61.10	75.71	57.95
1987	68.08	65.54	74.93	62.22	80.91	61.97
1988	72.22	69.09	80.99	62.61	84.44	65.06
1989	75.71	71.80	83.92	69.29	90.35	68.71
1990	79.24	73.64	83.96	71.35	91.43	71.31
1991	82.23	75.96	84.32	70.50	91.02	72.89
1992	84.28	77.12	84.62	65.58	89.41	72.44
1993	86.33	78.36	86.35	66.92	90.78	74.10
1994	87.40	79.83	87.14	65.08	91.55	74.04
1995	89.51	81.99	89.70	66.29	92.30	76.16
1996	90.73	84.48	90.92	70.85	93.20	79.26
1997	92.84	87.35	92.70	72.26	93.52	81.54
1998	95.15	91.99	95.06	66.57	94.86	80.94
1999	97.08	95.05	96.05	73.71	93.77	86.31
2000	100.00	100.00	100.00	100.00	100.00	100.00
2001	102.31	105.84	103.00	96.79	100.34	101.13
2002	103.08	109.89	102.92	86.88	93.57	99.49
2003	105.53	113.78	102.38	89.53	95.58	101.90

Sources, 1830-1864 (adaption to SNA 1953), Population censuses 1835, 1845, 1855, 1865, Department of Finance 1839, 1843, 1852, Central Statistical Office 1867, Schweigaard 1840, Tvethe 1848, NOS 1886, Kier 1887, NOS 1893, NOS 1949, NOS 1965, Bjerke 1966, NOS 1969, NOS 1978, Solhaug 1976, Bjørnland 1978, Hodne 1981, Hodne 1984, Hodne & Grytten 1995, Hodne & Grytten 2000, Brautaset 2003, Grytten 2004 and Grytten 2004A
1865-2003: Data from Statistics Norway, 1865-1949 (SNA 1953),
1950-1959 (adaption to SNA 1968), 1960-1969 (SNA 1968), 1970-2003 (SNA 1993).

Table 8. GDP for Norway 1830-2003. Volume indices (2000=100).

Year	GDP	GDP per capita	Year	GDP	GDP per capita	Year	GDP	GDP per capita	Year	GDP	GDP per capita
1830	0.83	3.32	1880	2.58	6.03	1930	9.02	14.42	1980	54.55	59.97
1831	0.77	3.05	1881	2.60	6.08	1931	8.31	13.22	1981	55.08	60.34
1832	0.79	3.09	1882	2.60	6.08	1932	8.73	13.79	1982	55.20	60.24
1833	0.89	3.43	1883	2.59	6.06	1933	8.94	14.05	1983	57.17	62.19
1834	0.94	3.58	1884	2.63	6.13	1934	9.26	14.47	1984	60.55	65.68
1835	0.93	3.51	1885	2.66	6.14	1935	9.72	15.11	1985	63.70	68.89
1836	0.91	3.40	1886	2.67	6.13	1936	10.38	16.05	1986	65.99	71.11
1837	0.92	3.41	1887	2.71	6.17	1937	10.84	16.68	1987	67.35	72.24
1838	0.93	3.41	1888	2.83	6.44	1938	11.08	16.95	1988	67.32	71.82
1839	0.94	3.41	1889	2.94	6.66	1939	11.62	17.66	1989	67.96	72.21
1840	1.03	3.72	1890	3.02	6.80	1940	10.63	16.06	1990	69.38	73.46
1841	1.06	3.78	1891	3.05	6.81	1941	10.89	16.36	1991	71.89	75.75
1842	1.08	3.80	1892	3.11	6.90	1942	10.47	15.62	1992	74.26	77.80
1843	1.06	3.71	1893	3.19	7.04	1943	10.26	15.19	1993	76.28	79.45
1844	1.09	3.78	1894	3.21	7.02	1944	9.72	14.27	1994	80.29	83.15
1845	1.16	3.94	1895	3.25	7.01	1945	10.90	15.83	1995	83.79	86.33
1846	1.19	4.00	1896	3.34	7.11	1946	12.01	17.24	1996	88.19	90.40
1847	1.16	3.84	1897	3.52	7.39	1947	13.64	19.35	1997	92.77	94.58
1848	1.10	3.63	1898	3.55	7.34	1948	14.58	20.46	1998	95.21	96.49
1849	1.14	3.72	1899	3.66	7.46	1949	14.97	20.79	1999	97.24	97.87
1850	1.18	3.80	1900	3.71	7.46	1950	15.70	21.60	2000	100.00	100.00
1851	1.27	4.03	1901	3.80	7.57	1951	16.55	22.55	2001	102.73	102.21
1852	1.27	3.99	1902	3.86	7.61	1952	17.14	23.13	2002	104.14	103.06
1853	1.34	4.17	1903	3.83	7.52	1953	17.82	23.81	2003	104.45	102.76
1854	1.39	4.28	1904	3.84	7.51	1954	18.72	24.76			
1855	1.48	4.49	1905	3.87	7.53	1955	19.13	25.06			
1856	1.47	4.39	1906	4.03	7.80	1956	20.15	26.15			
1857	1.40	4.15	1907	4.20	8.11	1957	20.76	26.70			
1858	1.47	4.29	1908	4.34	8.31	1958	20.76	26.46			
1859	1.53	4.38	1909	4.43	8.41	1959	21.63	27.34			
1860	1.61	4.52	1910	4.62	8.70	1960	22.85	28.65			
1861	1.58	4.39	1911	4.80	8.97	1961	24.28	30.21			
1862	1.73	4.76	1912	5.03	9.32	1962	24.97	30.81			
1863	1.75	4.77	1913	5.30	9.73	1963	25.92	31.75			
1864	1.84	4.94	1914	5.41	9.83	1964	27.21	33.08			
1865	1.94	5.14	1915	5.65	10.16	1965	28.66	34.56			
1866	1.97	5.19	1916	5.87	10.45	1966	29.74	35.59			
1867	2.02	5.28	1917	5.34	9.39	1967	31.60	37.49			
1868	2.02	5.25	1918	5.12	8.92	1968	32.31	38.02			
1869	2.10	5.44	1919	6.00	10.35	1969	33.76	39.41			
1870	2.09	5.40	1920	6.39	10.90	1970	34.44	39.90			
1871	2.13	5.47	1921	5.77	9.72	1971	36.20	41.65			
1872	2.27	5.79	1922	6.39	10.65	1972	38.05	43.44			
1873	2.32	5.89	1923	6.56	10.87	1973	39.72	45.04			
1874	2.41	6.05	1924	6.56	10.80	1974	41.39	46.64			
1875	2.48	6.15	1925	6.97	11.39	1975	43.55	48.81			
1876	2.55	6.26	1926	7.07	11.49	1976	46.11	51.43			
1877	2.57	6.23	1927	7.34	11.88	1977	48.07	53.40			
1878	2.48	5.93	1928	7.66	12.36	1978	49.75	55.05			
1879	2.50	5.90	1929	8.39	13.47	1979	51.98	57.32			

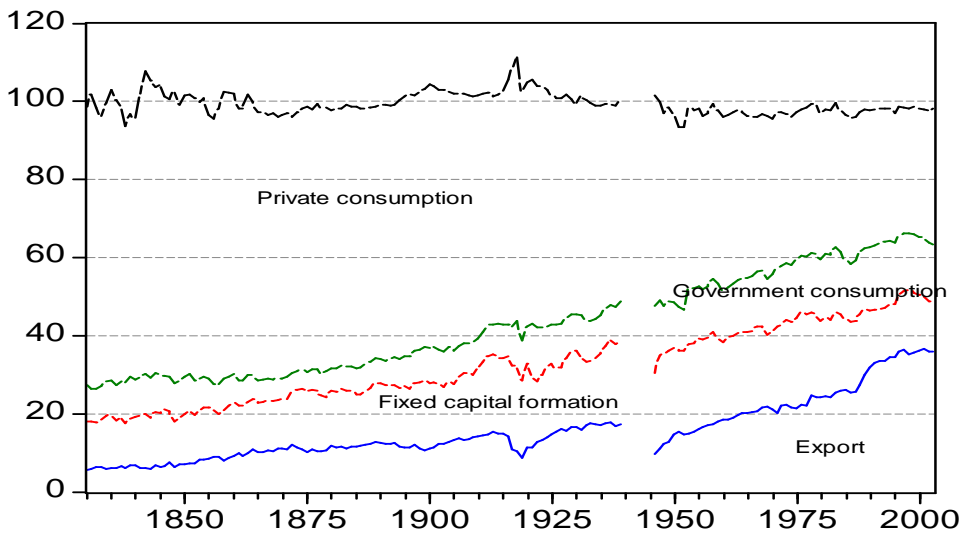


Figure 5: Demand components as percentage share of total supply of goods and services (imports and domestic production, GDP). Data for Norway 1830-2003. Data for the WWII years are not available.

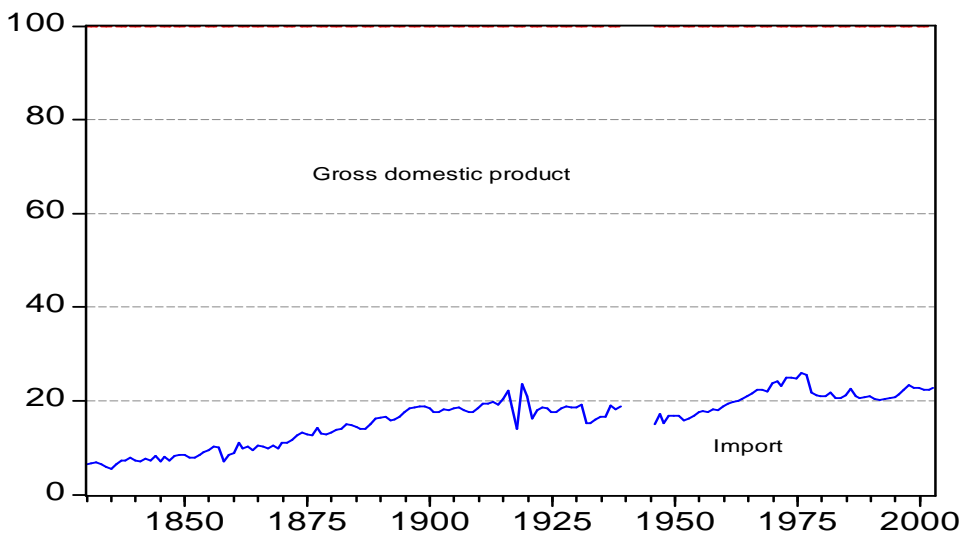


Figure 6: Decomposition of total supply (imports and domestic production, GDP) for Norway 1830-2003. Data for the WWII years are not available.

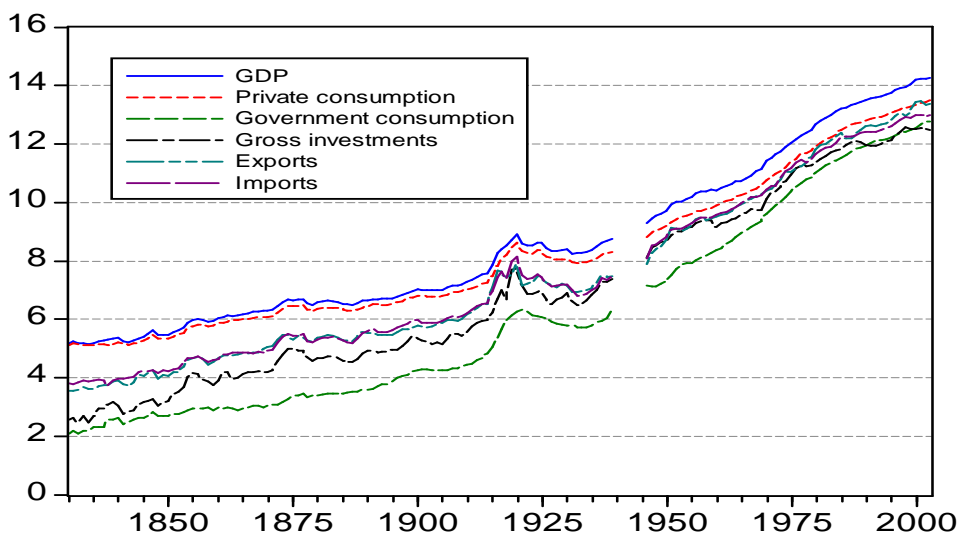


Figure 7: GDP for Norway 1830-2003 in current prices (mill NOK, logarithmic scale). Data for the WWII years are not available.

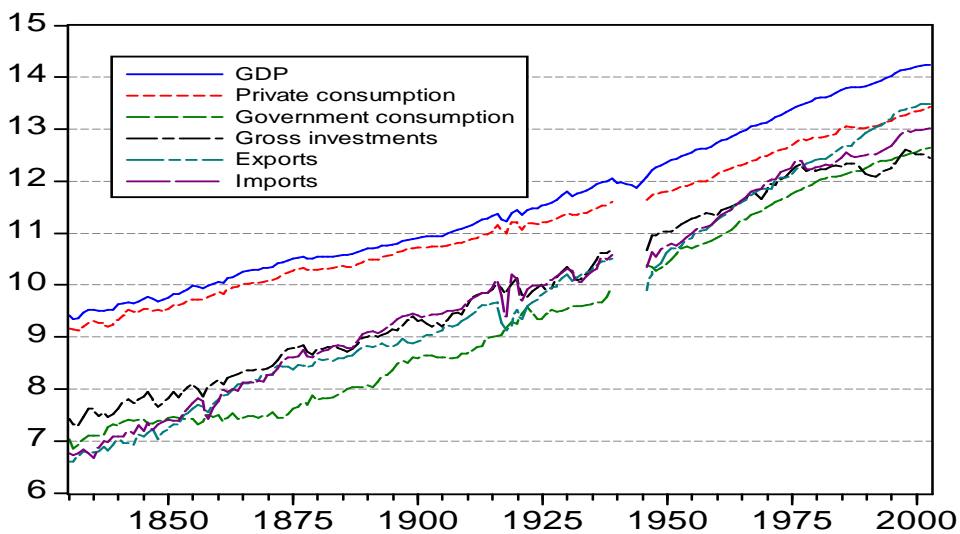


Figure 8: GDP for Norway 1830-2003 (mill 2000-NOK, logarithmic scale). Data for the WWII years are not available for the expenditure components.

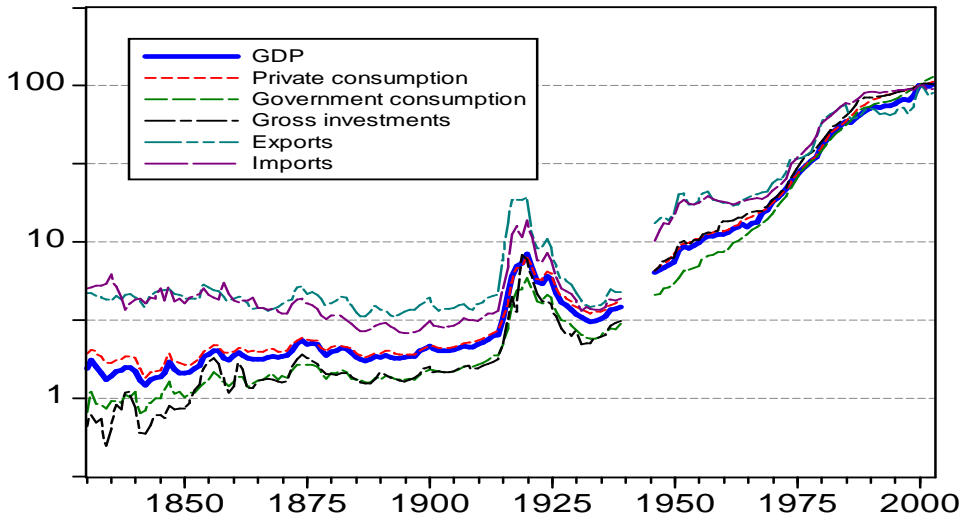


Figure 9: Price deflators 1830-2003 (2000=100), logarithmic scale. Data for the WWII years are not available.

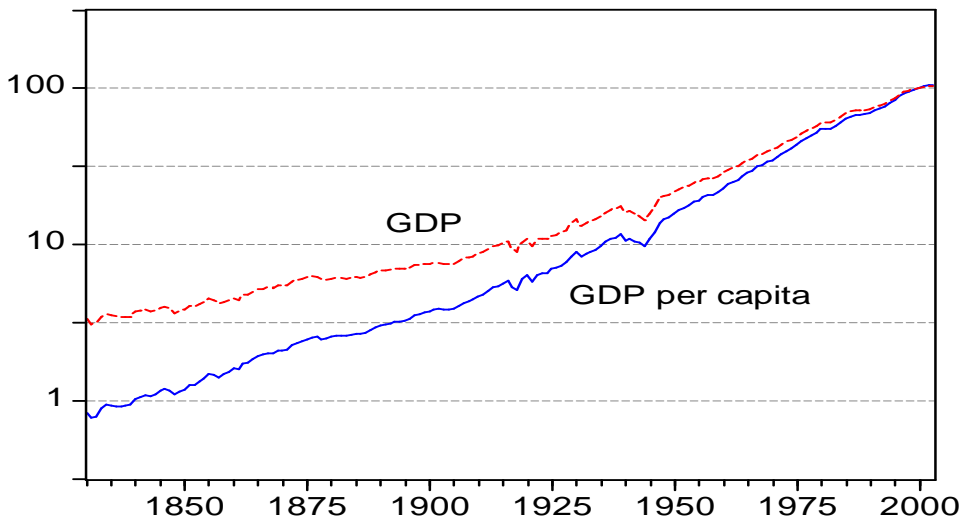


Figure 10: GDP for Norway 1830-2003. Volume indices including WWII (2000=100), logarithmic scale.